

BRIGHAM YOUNG
UNIVERSITY



Annual Catalog Issue
1964-66

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Brigham Young University

Bulletin



CATALOG OF COURSES

1964-65 and 1965-66

This catalog covers two complete academic years. Please keep it for reference throughout the 1964-65 and 1965-66 school years.

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University Calendar

Although as accurate as possible at the time of the printing of this catalog, the calendar is subject to change at the discretion of the University administration.

1964-65

Fall Semester

- September 10, 11, 12 (Thursday, Friday, Saturday):** Utah Conference on Higher Education.
- September 14, 15 (Monday, Tuesday):** Preschool Faculty Conference.
- September 15, 16 (Tuesday, Wednesday):** New-student orientation.
- September 17 (Thursday):** New-student registration.
- September 18, 19 (Friday, Saturday):** Registration for all regular and special students.
- September 21 (Monday):** Class instruction begins.
- October 9 (Friday):** Last day on which late registration may occur for Fall Semester and for adding and dropping classes.
- October 31 (Saturday):** Homecoming—Utah State University at Provo.
- November 13 (Friday):** Midsemester registration for students released from missions and from active duty with the Armed Services since the close of late registration.
- November 26, 27 (Thursday, Friday):** Thanksgiving recess.
- December 18 (Friday):** Last day of classes before Christmas recess.
- January 4 (Monday):** Classes resume after Christmas recess.
- January 16 (Saturday):** End of formal class period for Fall Semester. Final examinations may not be given before January 20.
- January 18, 19, 20, 21, 22, 23, 25, 26, 27 (Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Monday, Tuesday, Wednesday):** Fall Semester examination period.

Spring Semester

- January 29 (Friday):** New-student orientation.
- February 1, 2 (Monday, Tuesday):** Registration for all new and regular students.
- February 3 (Wednesday):** Class instruction begins.
- February 19 (Friday):** Last day on which late registration may occur for Spring Semester and for adding and dropping classes.
- March 26 (Friday):** Midsemester registration for students released from missions and from active duty with the Armed Services since the close of late registration.
- May 5 (Wednesday):** "Y" Day.
- May 18, 19 (Tuesday, Wednesday):** End of formal class periods for Spring Semester. Final examinations may not be given before May 20.
- May 20, 21, 22, 24, 25, 26, 27 (Thursday, Friday, Saturday, Monday, Tuesday, Wednesday, Thursday):** Spring Semester final examinations.
- May 27 (Thursday):** Baccalaureate Exercises.
- May 28 (Friday):** Commencement Exercises.

Summer Session, 1965

- June 7, 8, 9, 10, 11, 12 (Monday, Tuesday, Wednesday, Thursday, Friday, Saturday):** Special workshops and conferences.
June 14 (Monday): Registration.
June 15 (Tuesday): First Term begins.
July 5 (Monday): National holiday observed.
July 16 (Friday): First Term ends.
July 19 (Monday): Second Term begins - registration.
July 24 (Saturday): State holiday observed.
August 19 (Thursday): Second Term ends - convocation.

1965-66

Fall Semester

- September 9, 10, 11 (Thursday, Friday, Saturday):** Utah Conference on Higher Education.
September 13, 14 (Monday, Tuesday): Preschool Faculty Conference.
September 14, 15 (Tuesday, Wednesday): New-student orientation.
September 16 (Thursday): New-student registration.
September 17, 18 (Friday, Saturday): Registration for all regular and special students.
September 20 (Monday): Class instruction begins.
October 8 (Friday): Last day on which late registration may occur for Fall Semester and for adding and dropping classes.
October 9 (Saturday): Junior English Proficiency Examination.
November 6 (Saturday): Homecoming, University of Utah at Provo.
November 12 (Friday): Midsemester registration for students released from missions and from active duty with the Armed Services since the close of late registration.
November 20 (Saturday): Junior English Proficiency Examination.
November 25, 26 (Thursday, Friday): Thanksgiving recess.
December 17 (Friday): Last day of classes before Christmas recess.
January 3 (Monday): Classes resume after Christmas recess.
January 17, 18 (Monday, Tuesday): End of formal class period for Fall Semester. Final examinations may not be given before January 19.
January 19, 20, 21, 22, 24, 25, 26 (Wednesday, Thursday, Friday, Saturday, Monday, Tuesday, Wednesday): Fall Semester examination period.

Spring Semester

- January 28 (Friday):** New-student orientation.
January 31, February 1 (Monday, Tuesday): Registration for all new and regular students.
February 2 (Wednesday): Class instruction begins.
February 12 (Saturday): Junior English Proficiency Examination.
February 18 (Friday): Last day on which late registration may occur for Spring Semester and for adding and dropping classes.
March 25 (Friday): Midsemester registration for students released from missions and from active duty with the Armed Services since the close of late registration.
April 9 (Saturday): Junior English Proficiency Examination.
May 4 (Wednesday): "Y" Day.
May 17, 18 (Tuesday, Wednesday): End of formal class periods for Spring Semester. Final examinations may not be given before May 19.
May 19, 20, 21, 23, 24, 25, 26 (Thursday, Friday, Saturday, Monday, Tuesday, Wednesday, Thursday): Spring Semester final examinations.
May 26 (Thursday): Baccalaureate Exercises.
May 27 (Friday): Commencement Exercises.

Student Academic Services

Office of Admissions and Records

The Office of Admissions and Records is primarily a service office for all Brigham Young University students from the date they apply until they graduate from the University. It is also a service agency to parents, faculty, the State, and various agencies eligible to receive information regarding the records of students.

Functions performed by the Office of Admissions and Records include the following: admitting and registering students, preparing class schedules, assigning instructional space, assigning office space, evaluating transfer credit, evaluating foreign student credit, preparing graduation summary reports, preparing academic grade reports, preparing transcripts of University credit, providing Selective Service information, providing statistical information, and communicating with high schools, colleges, and universities.

The director of Admissions and Records has general supervision over the services listed above. It is his responsibility to initiate and to recommend regulations, policies, and procedures for implementing these student academic services and to administer the program of the Office of Admissions and Records as approved by the administration of the University.

Admission

General Standards. Admission to the University is granted on the basis of an official application. Necessary forms are furnished by the Office of Admissions and Records upon request.

Students who apply for admission and who are accepted by Brigham Young University are required to maintain ideals and standards in harmony with those of the Church of Jesus Christ of Latter-day Saints. High standards of honor, integrity, and morality; graciousness in personal behavior; application of Christian ideals in everyday living; and abstinence from tea, coffee, alcohol, and tobacco are required of every student.

Deadline for Application. All applications for admission and readmission and the necessary accompanying materials, including two copies of all transcripts and scores from the American College Tests, must reach the Admissions Office no later than the deadline dates indicated below. Students who do not meet these deadline dates may not enroll until a subsequent semester.

Students who wish
to enroll for
Fall Semester
Spring Semester
Summer School

Must have submitted all
admission materials by
July 31
December 30
May 31

American College Tests. Before being admitted to Brigham Young University, all entering freshmen must take the American College Tests. Students must take the tests sufficiently early for the results to reach the Admissions Office before the deadline dates indicated above.

The tests, which cost \$4.00, are administered in November, February, April, and June at testing centers located in all of the states. Students are encouraged to take this test as early as possible during their senior year of high school. Information can be obtained from high school principals and counselors or from the B.Y.U. Office of Admissions and Records or from ACT Central Registration Unit, 519 West Sheridan Road, McHenry, Illinois, 60050. Students will not be admitted without these test results.

Special arrangements will be made for students who find it impossible to take the tests at regular ACT test centers to take the tests at B.Y.U. immediately prior to registration. A fee in addition to the regular test fee of \$4.00 will be required to help defray the costs of this special test appointment, and the student's admission may be denied at that late date if his combined grade-point average in the basic subjects listed below and his ACT scores are below the admission standard.

New Freshman Students. To be admitted to the University as a regularly matriculated student, an applicant must be a graduate of an approved high school and must have selected nine academic units from one or more of the following areas: English, mathematics, science, social science, foreign language. This means, for example, that a student might have three units of English, two of mathematics, two of science and two of social science or any other combination of high school units which totals nine. Admission will be granted upon the excellence of the high school academic record in the basic subjects listed above and ACT scores combined.

A student who has not graduated from high school but who has sixteen units (Carnegie) of high school credit and the recommendation of his high school principal may be admitted if his course of study and grades are approved by the Admissions Committee.

Students nineteen years of age and over who have not completed high school, but who otherwise are eligible for admission, may register as regularly matriculated students after the successful completion of the high school level General Educational Development Tests. These tests may be taken at Brigham Young University, at the testing divisions of most colleges and universities, at most armed forces educational centers, or at a number of high schools.

New Transfer Students. To be admitted to the University a transfer student must give evidence of having maintained an average of 2.0 (A=4.0, B=3.0, C=2.0, D=1.0, E=0) in his previous college work. He also must have a 2.0 grade-point average in his most recent college work. Any exceptions to the admissions standards must be approved by the Admissions Committee.

All freshman, sophomore, and junior transfer students must take the ACT Tests before they will be permitted to register. The results may be sent to B.Y.U. prior to orientation, or taken during orientation at B.Y.U. The tests are used for placement and counseling.

The early presentation of all transfer credit is necessary so that the credit may be properly evaluated prior to registration.

New students from Foreign Countries. To be admitted to the University a student from a foreign country who is not a U.S. citizen must present credentials corresponding to the requirements stated above under the headings "New Freshman Students" or "New Transfer Students." In addition, a clearance from the B.Y.U. foreign students adviser must be received in the Admissions Office before acceptance will be granted.

Tuition Deposits for All New Students. All new students, freshman and transfer, must send a nonrefundable tuition deposit of \$25 to the University treasurer, D-148 ASB, B.Y.U., within 30 days following notification of their acceptance. Failure to do so will invalidate their acceptance. The deposit will be used toward payment of fees when the student enrolls at B.Y.U.

Former B.Y.U. Students. All former B.Y.U. students who have discontinued school for one semester or more must apply for readmission. Readmission applications are furnished by the Office of Admissions and Records upon request.

Repeating Students. Registration packets are prepared for all students in attendance at the University the previous semester.

Summer School Students. The same admission requirements as already outlined apply to new summer school applicants.

Students in attendance at either of the two previous summer sessions need not apply for readmission. Registration packets are prepared for them.

Notice of Acceptance. A notice of acceptance will be mailed promptly to all new and former students accepted by the University. A student with deficiencies will receive an answer to his application for admission outlining the problems involved.

Advanced Placement

Eight semester hours of credit will be granted for a composite grade of 5, 4, or 3 on any advanced-placement examination taken by a high school student at the completion of a full-year course, with class meetings held each day of the school year, organized according to the description published by the Committee on Advanced Placement of the College Entrance Examination Board.

Upon recommendation of the academic department concerned, Brigham Young University may (a) grant eight semester hours of credit for a grade of 2 on both parts of an advanced-placement examination taken under conditions described in Paragraph 1, or (b) may allow appropriate advanced placement without college credit. A departmental recommendation will be based upon a review of all pertinent factors, including the student's advanced-placement examination and his achievement in the special course.

Registration

Registration Procedure. Details of the registration procedure are outlined in the class schedule issued each semester by the Office of Admissions and Records.

Limitation on Credit in One Semester. An undergraduate student in good standing may register for as many as 17 hours of credit in any one semester by following the regular registration procedure. In the case of a student who has high academic ability, the dean of a college may authorize the student to register for a maximum of 18 hours for the first semester in residence and a maximum of 19 hours for any succeeding semester. Any student who has completed 15 or more hours of college work and who has a cumulative grade-point average of 3.5 (or a 3.5 average in the semester previous to registration) may register, with the consent of his dean, for 21 hours. Classes taken for audit, by correspondence, and evening school or off-campus courses constitute a part of the student's total registration. Any exceptions to the above rules must be presented to the director of Admissions and Records for consideration.

Time of Registration. Students are urged to register on the days set for registration (See University Calendar). A late fee is charged each student who does not complete his registration on the specified days. The term "registration" refers to the entire procedure, including the payment of fees. A student may enroll in any class during the first three weeks of the semester if he has the approval of his adviser, the permission of the instructor of the class, and the approval of the dean of the college in which he is enrolled.

Course Divisions. Courses of study are given numbers as follows:

Preparatory and remedial courses	1- 99
Lower division courses	100-299
Upper division courses	300-499
Graduate or advanced undergraduate courses	500-599
Graduate courses	600 and above

Withdrawal from Classes. Any student withdrawing from individual classes must clear with his adviser, the instructor of the class, and the dean of the college in which he is registered.

- If a student officially withdraws from a class during the first three weeks of a semester, the permanent record will not show a registration for the class.
- A student doing passing work in a course may drop the class between the third and tenth week if such action is recommended by the teacher, the student's adviser, and the dean of his college. A grade of "W" will be assigned for the class. A student doing failing work in a course may drop the class after the first three weeks if he has the approval of his adviser and the dean of his college and the teacher's signature. A grade of "WE" will be assigned for each class so dropped. A "WE" grade counts the same as an "E" grade in computing the grade-point average.

- c. If a student drops a class at any time during the semester without officially withdrawing, he will receive a grade of "UW" (meaning unofficial withdrawal) in each course so dropped. This will indicate that the student has failed to clear officially with the University. A "UW" grade counts the same as an "E" grade in computing the grade-point average.

Withdrawal from Evening School Classes. A student withdrawing from classes for which he has registered in the Evening School Office must do so by notifying that office and by completing the withdrawal forms. An Evening School student who does not properly withdraw will receive a failing grade.

Complete Withdrawal from the University. A student discontinuing his entire registration at the University is required to clear his termination through the office of the dean of his college and the office of the dean of students. A student withdrawing from the University after the third week must be doing passing work in order to discontinue without academic failure.

Registration of Prospective Secondary Teachers. All certificates for teaching, counseling, supervising, administration, special education, and library work in the public schools of Utah are granted by the State Department of Public Instruction.

When all requirements for state certification have been fulfilled, students of the University registered in any of its colleges or in the Graduate School will be recommended for certification by the dean of the College of Education. The President makes final decisions on all matters pertaining to education in the University. The President has assigned the dean of the College of Education to act in an administrative capacity as the representative of the University. The dean is assigned the responsibility to give final approval on all aspects of the teacher education program, including matters pertaining to general education, professional education, and teaching majors and minors. All students in the teacher certification program, regardless of their college registration, are required to have an assigned adviser in the College of Education to approve their programs.

Most students seeking an elementary certificate register in the College of Education. However, programs are available for majors in human development and family relationships and in speech correction to obtain an elementary teaching certificate.

Students desiring state certificates should make application with the dean of the College of Education through the Teacher Certification Office and not with the State Department of Public Instruction.

Completion of Registration. When the student has followed the prescribed registration procedure and has paid his fees, his registration is complete. The University will hold the student responsible for completion of the courses for which he has enrolled, unless he obtains approval for a change in registration or files an official withdrawal from the University.

Records

Classification of Students. At the beginning of each semester, regular students are classified for that semester as follows:

Credit hours earned	Classification
0 to 31	freshman
32 to 62	sophomore
63 to 93	junior
94 and over	senior

Engineering students having more than 124 semester hours are classified as fifth-year professional students. Completion of the required courses in freshman composition is prerequisite to classification as a junior. A student who has met the entrance requirements but who registers for nine hours of work or less will be classified as a part-time student.

A regular student who has completed all requirements for the bachelor's degree is classed as a graduate student. A graduate student or a student holding a bachelor's degree from a four-year accredited institution may register at Brigham Young University as follows:

- a. In the Graduate School under the regular requirements for an advanced degree.
- b. In the Graduate School as a nondegree-seeking student.

Admission procedures to the Graduate School are indicated in the Graduate School Catalog and apply to those who have graduated from Brigham Young University as well as from other universities.

Credits. A student may earn credit which will be recognized by the University in the following ways:

- a. Completing work in the regular courses offered by the institution.
- b. Completing courses by correspondence, in the evening school, or in the off-campus centers. All such courses taken by a currently enrolled student must have the approval of the student's dean and will be considered part of his current semester load. Credit earned through classes which constitute unauthorized overload will not be allowed.
- c. Completing work in an accredited college and then transferring the credit to Brigham Young University. Credit from other schools must be filed with the Office of Admissions and Records upon application for admission to the University.
- d. Passing a satisfactory examination in any course offered by the University, providing the student has never been registered in the class either for credit or audit. Such credit will be given only with the consent of the chairman of the department concerned and the dean of the college in which the student is registered. A fee of \$7.50 per credit hour is charged for special examinations, provided the total fee for any one subject does not exceed \$45.00.

By payment of an auditing fee a student may obtain permission to audit courses of instruction. Under no circumstances may credit be obtained by means of special examinations for courses which have been audited or in which the student has been enrolled.

Grading System

The present grading system uses the letters A, A—, B+, B, B—, C+, C, C—, D+, D, and D— to indicate that the student receives credit, and an E to indicate that no credit is allowed.

The "A" grade is given only to students whose intellectual capacity and actual academic achievement are of exceptional quality. Work of a quality somewhat higher than average but not of exceptional quality receives a "B." "C" indicates that the student has completed classroom work, outside assignments, and examinations in an average manner.

Students who fail to reach the average academic achievement, but who do work of a quality still acceptable to the University are given a "D" grade. A "D" grade draws credit even though the work done is not fully satisfactory. Students failing to achieve work of minimum university quality receive an "E" grade. This grade mark draws no credit.

If a student withdraws officially from a class during the first three weeks of a semester, the permanent record will not show a registration for that class.

If a student properly withdraws from a class between the third and twelfth week, his record will be marked "W" if he is passing in the course and "WE" if he is failing the course.

If a student discontinues attending a class at any time during the semester without going through the official withdrawal procedures, he will receive a grade of "UW" (unofficial withdrawal). A "UW" has the same negative value as an "E" in computing a grade-point average.

Students withdrawing after the third week who cannot present a valid excuse for being absent from class prior to withdrawal are graded "UW" if they do not withdraw officially and "WE" if they withdraw officially.

The letter "I" (incomplete) is used to indicate that the work is not yet completed. It is given only when special arrangements for the completion of the

specific work involved have been made between the teacher and the student. The "I" never is given when the student has failed or is failing the course. An "I" grade is regarded as an "E" in the Office of Admissions and Records unless the work is completed within one year from the date the grade is given.

When a thesis or dissertation has been completed, any one of the following marks may be given: (1) "E" for failure; (2) A specific grade indicating that the thesis is acceptable to the department on a credit basis; or (3) "G" when the thesis has been satisfactorily completed but the department desires to register no grade for credit. The letter "P" (passed) is used only in connection with the student teaching program of the College of Education of the University.

Once recorded in the Office of Admissions and Records, no final grade may be changed except to correct the record when an error in calculation has been made by the teacher, in posting by the Data Processing Department, by the Office of Admissions and Records, or by action of the Academic Regulations Committee. When such corrections need to be made, an official "Teacher Grade Change Authorization" form must be filled out; signed by the teacher, the chairman of the department, and the dean of the college; and sent directly to the Office of Admissions and Records.

Semester grade reports are mailed to all students at the end of each semester if they leave a self-addressed, stamped envelope with the Records Office. It is also the policy of the University to send semester grade reports to the parents of all single freshman students under twenty-one years of age and all unmarried students who are on academic probation.

Grade-Point Values

A	4.0	C	2.0
A -	3.7	C -	1.7
B +	3.4	D +	1.4
B	3.0	D	1.0
B -	2.7	D -	.7
C +	2.4	E	.0

Repeating Classes. Classes may be repeated in the following ways:

- Repeat at Brigham Young University courses taken at Brigham Young University.
- Repeat at Brigham Young University courses taken at other institutions.
- Repeat at other institutions courses taken at the same institution and have the credit transferred to Brigham Young University.

When a class has been repeated, the grade used in the calculation of the student's grade-point average is the grade earned the last time the repeated class was taken.

Degrees Offered

Two-year Certificates. A two-year certificate is awarded by the University in the fields of agriculture, business, commercial art, engineering, genealogy, homemaking, and industrial technology.

Baccalaureate Degrees. The University confers the baccalaureate degrees of Bachelor of Engineering Science, Bachelor of Science, Bachelor of Arts, Bachelor of Music Education, and Bachelor of Fine Arts in the various academic colleges.

Advanced Degrees. Requirements for master's and doctor's degrees conferred by the University are described in the Graduate School section of this catalog.

Doctor's degrees are awarded by the University in the fields of bacteriology, botany, chemistry, child development, family relationships, marriage counseling, geology, educational administration, educational psychology, curriculum and instruction, bible and modern scripture, history of religion, religious education, history, music, physics, psychology, sociology, and zoology and entomology.

Summary of Undergraduate Majors

Col. Code	Dept. or Maj. Code	List of Coded Areas	Major 4 yr.	Major 2 yr.	Minor	Neither Major nor Minor
06	000	Provisional Registration				
02	010	Accounting	x		x	x
06	012	Accounting*		x		
01	040	Agriculture				x
01	030	Agricultural Economics	x		x	
06	032	Agricultural Economics*		x		
01	060	Agronomy	x		x	
06	062	Agronomy*		x		
09	075	Air Science			x	
01	095	Animal Science	x		x	
06	097	Animal Science*		x		
07	102	Anthropology	x		x	
07	107	Arabic				x
07	110	Archaeology	x		x	
05	125	Art	x		x	
07	130	Asian Studies	x			
01	140	Bacteriology	x		x	
—	155	Bible & Modern Scripture***				
—	170	Biblical Languages				x
01	185	Botany	x		x	
06	192	Building Construction*	x			
02	200	Business Education	x		x	
02	215	Business Management	x		x	
06	217	Business & Office Management*		x		
09	245	Chemical Engineering	x			
09	260	Chemistry	x		x	
09	262	Chemistry, Teaching	x			
07	267	Chinese				x
—	271	Church Administration				x
09	275	Civil Engineering	x			
06	277	Civil Engineering Tech.*		x		
04	290	Clothing & Textiles	x		x	
06	294	Commercial Art*		x		
05	291	Communications	x			
06	295	Computer Programming*		x		
—	297	Devotional Assemblies				x
06	302	Drafting Technology*		x		
05	305	Dramatic Arts	x		x	
06	307	Drawing, Mechanical*	x			
02	310	Economics	x		x	
07	310	Economics	x		x	
03	322	Philosophy of Education***				
03	325	Educational Administration***				
03	347	Educational Psychology***				
09	380	Electrical Engineering	x			
06	387	Electrical Engineering Tech.*		x		
06	389	Electronics Engineering Tech.*		x		
07	415	English	x		x	
04	457	Food and Nutrition	x		x	
—	459	Forum Assemblies				x
07	462	French	x		x	
06	465	Genealogical Research*		x		

Summary of Undergraduate Majors (Continued)

Col. Code	Dept. or Maj. Code	List of Coded Areas	Major 4 yr.	Major 2 yr.	Minor	Neither Major nor Minor
06	467	General Agriculture*		x		
07	470	Geography	x		x	
09	485	Geology	x		x	
07	492	German	x		x	
03	495	Graduate Education—Higher***				
03	494	Graduate Education—General***				
03	958	Graduate Education—Secondary***				
03	957	Graduate Education—Elementary***				
07	497	Greek				
07	510	Hebrew				x
10	505	Health & Safety Education	x		x	
07	520	Hispanic-American Studies	x			
07	535	History	x		x	
—	550	History & Philosophy of Religion***				
04	570	Homemaking Education	x			
06	575	Homemaking Technology*		x		
01	585	Horticulture	x		x	
06	587	Horticulture*		x		
04	600	Housing & Home Mgt.	x		x	
04	615	Human Dev. & Family Rel.	x		x	
07	630	Humanities	x		x	
06	645	Industrial Education	x			
06	646	Industrial Electronics*		x		
07	658	Institute Govt. Service***				
07	677	Italian				
07	682	Japanese				x
05	685	Journalism	x		x	
07	695	Korean				
07	707	Latin	x		x	
—	715	Library Science			x	
06	720	Light Building Construction*		x		
07	727	Linguistics				
02	733	Master Business Admin.***				x
09	735	Mathematics	x		x	
09	750	Mechanical Engineering	x			
06	752	Mechanical Engineering Tech.*		x		
01	757	Medical Technology	x			
05	767	Music, Applied	x		x	
05	769	Music Education	x		x	
05	771	Music Theory	x		x	
05	773	Musicology***				
07	777	Norwegian				x
08	780	Nursing	x	x	x	
02	787	Office Management	x			
03	792	Personnel & Guidance***				
10	795	Physical Education	x		x	
09	801	Physical Science				
09	815	Physics	x		x	
07	835	Political Science	x		x	
07	842	Portuguese	x		x	
07	852	Predental Sociology	x			
01	852	Predental Zoology	x			
09	852	Predental Chemistry	x			
07	857	Premedical Sociology	x			

Summary of Undergraduate Majors (Continued)

Col. Code	Dept. or Maj. Code	List of Coded Areas	Major 4 yr.	Major 2 yr.	Minor	Neither Major nor Minor
01	852	Premedical Zoology	x			
09	857	Premedical Chemistry	x			
01	859	Preoptometry Zoology	x			
01	861	Prepharmacy Zoology	x			
10	863	Prephysical Therapy	x		x	
01	867	Preveterinary, An. Sci.	x			
07	870	Psychology	x		x	
10	890	Recreation	x		x	
—	900	Department of Religious Education***				
07	917	Russian	x		x	
06	923	Skills Improvement				x
07	925	Sociology	x		x	
07	937	Spanish	x		x	
05	940	Speech	x		x	
02	955	Statistics	x		x	
09	955	Statistics	x		x	
03	957	Teacher Education—Elementary**	x			
03	958	Teacher Education—Secondary**	x			
03	959	Teacher Education—Special Ed.**	x			
—	961	Theology				x
06	960	Tool Design Tech.		x		
06	962	Tool & Manufacturing	x			
06	967	Welding Tech.		x		
10	970	Youth Leadership	x		x	
01	985	Zoology	x			
20	999	Graduates Unclassified***				

*Fills minor requirements if accepted by student's major department.

**Students need at least 25 hours in teacher education to certify—not considered a minor.

***Graduate degree only.

Totals Offered

Major—4 year	76	Programs of concentrated	
Major—2 year	21	study, but neither major	
Minor	51	nor minor offered	18

General Education Program

Transfer Students. At Brigham Young University a student has completed the general education requirements except in religion and American history and government if he has graduated from any accredited, two-year collegiate institution having a pattern of general education similar to that at B.Y.U. provided that he presents satisfactory evidence of having completed these general education requirements. Also, a student has completed the general education requirements except religion and American history and government if he transfers to Brigham Young University from an accredited, four-year college or university having a pattern of general education similar to that at B.Y.U., provided that he presents satisfactory evidence of having completed the general education requirements of his former college. Other transfer students will have their transcripts audited in terms of the B.Y.U. program and will be notified prior to or during their first semester at B.Y.U. as to the requirements remaining to be completed.

American History and Government. This requirement, which applies to all candidates for the bachelor's degree, may be satisfied by examination or by

course work. Every student entering the University takes a placement test covering both American history and American government. Students showing highly superior preparation are exempted from course work under the requirement. All other students take History 170, except as provided below.

Students majoring or minoring in history, political science, economics, finance and banking, journalism, or secondary education (social science) take whichever of the following combinations is recommended for their field: History 120 and 121; History 121 and Political Science 110; or Economics 274 and Political Science 110. Other students also may elect these combinations instead of History 170. For general education group-filling purposes a student taking one of these combinations may elect to apply either of the courses to the American history and government requirement and the other to the general education category in which the course is regularly listed.

Transfer students desiring to offer work from other institutions to satisfy all or part of this requirement should consult the History Department.

Biological Science. Six semester hours are required. At least two departments should be represented, and at least one of the courses must have a weekly laboratory period. Courses which fulfill this group requirement are listed below:

Bacteriology 121	(3)	General Bacteriology
Bacteriology 311	(2)	Sanitation and Public Health
Bacteriology 321	(3)	General Microbiology
Bacteriology 322	(1)	General Microbiology Laboratory
Bacteriology 331	(5)	Microbiology
Botany 101	(3)	Plant Biology
Botany 105	(3)	The Plant Kingdom
Botany 205	(2)	Field Botany
Botany 276	(3)	Heredity
Botany 376	(3)	Genetics
Botany 450	(3)	Plant Ecology
Botany 460	(2)	Conservation of Natural Resources
Zoology 105	(3)	Animal Biology
Zoology 212	(4)	Invertebrate Zoology
Zoology 213	(4)	Vertebrate Zoology
Zoology 261	(3)	Elementary Human Physiology
Zoology 262	(2)	Anatomy and Physiology Laboratory
Zoology 263	(1)	Elementary Physiology Laboratory
Zoology 276	(3)	Heredity
Zoology 315	(3)	Natural History
Zoology 376	(4)	Genetics

English Composition. Six semester hours are required for the majority and four semester hours for the group selected by testing for English 115 or 116, or three semester hours for Honors Program students in English 118.

Health. Health 130, two semester hours, must be taken during either semester of the freshman year. For students presenting evidence of superior preparation, the requirement may be waived. This is determined by an examination prepared by the Department of Health and Safety Education. Students must register for the class and then petition for the examination. Nurses who complete Nursing 202 and 212 are also exempt.

Humanities and Fine Arts. Eight semester hours are required. Of the eight hours the student must take three hours in literature and course work in at least two other departments. A full year's beginning course of eight semester hours in a foreign language carries three semester hours toward satisfying this group requirement and reduces the requirement in literature to two semester hours.

Archaeology 200	(3)	Introduction to Archaeology
Archaeology 380	(3)	Old World Archaeology: Historic
Art 101	(2)	Introduction to Art
Art 108	(2)	General Art
Art 110	(2)	Design in Everyday Life

- Art 306 (3) Art History and Appreciation
 Art 307 (2) Contemporary Art
 Art 308 (2) American Art
 Art 403 (2) Ancient and Primitive Art
 Art 405 (3) Medieval and Renaissance Art
 Communications (Journalism) 101 (2) Introduction to Mass Communications
 Dramatic Arts 121 (3) Voice, Diction, and Interpretation
 Dramatic Arts 315 (2) Introduction to the Theatre
 Economics 274 (3) Economic and Financial History of the United States
 English 250 (3) Introduction to Literature
 English 252 (2) Introduction to Poetry
 English 253 (2) Introduction to Drama
 English 254 (2) Introduction to Biography
 English 260 (3) Masterpieces of American Literature
 English 270 (3) Masterpieces of English Literature
 English 277 (4) Survey of American Literature
 English 282 (2) Shakespeare
 English 332, 333 (3 ea.) The English Novel
 English 335, 336 (2 ea.) The American Novel
 English 338 (3) The European Novel
 English 341, 342, 343 (2 ea.) English and American Drama
 English 350 (2) The Bible as Literature
 English 355, 356 (3 ea.) World Classics
 English 359 (2) The Short Story
 English 361, 362 (4 ea.) American Literature
 English 366 (2) Modern Poetry
 English 367 (2) English and American Folk Ballads
 English 371 (3), 372, 373, 374, 375 (4 ea.) English Literature
 English 380 (5) Twentieth Century Literature
 English 381 (3) Chaucer
 English 382 (3) Shakespeare
 History 110 (3) World Civilization I
 History 111 (3) World Civilization II
 History 120 (3) The United States to 1865
 History 121 (3) The United States since 1865
 History 300 (2) The Early Oriental History
 History 304 (3) Greek History and Civilization
 History 307 (3) Roman History and Civilization
 History 311 (3) History of the Middle Ages
 History 312 (2) Renaissance: Age of Transition
 History 313 (2) The Reformation: Age of Turmoil
 History 323 (2) Europe in the Twentieth Century
 History 335 (3) England
 History 340 (3) Asia
 History 379 (3) Contemporary American History (since 1920)
 History 352 (3) History of Latin America II
 History 373 (2) American Intellectual and Cultural Growth
 Humanities 101 (3) An Introduction to the Humanities
 Music 101 (3) Introduction to Music
 Music 103 (2) Survey of Music Literature
 Music 484, 485 (3 ea.) History of Music
 Philosophy 380 (2) Survey of Philosophy
 Philosophy 381 (2) Deductive Logic
 Philosophy 385 (2) Ethics—Plato to Dewey
 Philosophy 474 (2) Types of Religious Philosophy
 *French 441, 442 (3 ea.) Survey of French Literature and Culture I, Origins to 1800
 *French 443, 444 (3 ea.) Survey of French Literature and Culture II, 1800 to Present

- *German 441, 442 (3 ea.) Introduction to German Literature and Culture
- *German 443, 444 (3 ea.) Introduction to German Literature and Culture
- *Italian 431, 432 (3 ea.) Masterpieces of Italian Literature
- *Latin 441, 442 (3 ea.) Survey of Latin Literature and Culture
- *Portuguese 431, 432 (3 ea.) Masterpieces of Brazilian and Portuguese Literature
- *Russian 441, 442 (3 ea.) Masterpieces of Russian Literature
- *Spanish 351 (2) Hispanic Civilizations
- *Spanish 441 (3) Survey of Spanish Literature and Culture
- *Spanish 451 (3) Survey of Spanish-American Literature and Culture
- *Spanish 454 (3) Spanish-American Novel
- *Spanish 470 (3) The Narrative of the Golden Age
- Speech 102 (2) Introduction to Public Speaking

Physical Education. Two semester hours or the equivalent are required. One-half credit hour should be taken each semester of the freshman and sophomore years. (The transfer equivalent is based on class hours of activity and not necessarily on credit hours.) Exceptions: (1) Students majoring in and completing the course in engineering science together with requirements for an air science commission are not subject to the physical education requirement. (2) Engineering science students who withdraw from the air science program after two years are exempt from one semester hour of physical education.

Any 100-series course in physical education will count toward satisfying general education requirements in physical education.

Physical Science. Six semester hours are required. Courses must be selected from at least two of the following departments.

- Chemistry 100 (2) Elementary College Chemistry
- Chemistry 101 (5-4) Introductory Inorganic Chemistry (for family living, nursing, and related fields)
- Chemistry 104 (1) Elementary Chemistry Laboratory
- *Chemistry 105, 106 (4 ea.) General College Chemistry
- *Chemistry 111 (5) Principles of Chemistry
- *Chemistry 112 (5) Principles of Chemistry
- *Chemistry 151 (5-4) Introductory Organic Chemistry (for family living, nursing, and related fields)
- Geology 101 (2) Introduction to Geology
- Geology 102 (1) Introduction to Geology Laboratory (if taken, must accompany Geology 101)
- Geology 103 (3) Life in the Past
- Geology 111 (4) Physical Geology
- *Geology 112 (4) Historical Geology
- Geology 306 (3) Land Forms and Their Origin
- Physics 100 (3) Essentials of Physics
- *Physics 105, 106 (3 ea.) Technical Physics
- Physics 127 (3) Descriptive Astronomy, "The Solar System"
- Physics 137 (3) Weather and Climate
- Physics 177 (3) Physics of Light and Photography
- *Physics 201, 202 (4 ea.) General College Physics
- *Physics 211, 213 (4 ea.) General Physics: Classical (designed primarily for physical science, chemistry and engineering majors)
- *Physics 212, 214 (1 ea.) General Physics Laboratory

Religion. Two semester hours in religion are required for each full-time registration at B.Y.U. up to a total of sixteen semester hours. Part-time students are required to complete one semester hour in religion for each eight hours carried at B.Y.U.

- A. Freshmen and transfer students commencing their first year at B.Y.U.** are required to take the following courses:

Scripture

Religion 121, 122 Introduction to the Book of Mormon

- B. Sophomores and transfer students who have completed one year at B.Y.U. may choose one of the following courses to satisfy the religion requirement:**

Genealogy

Religion 203 Genealogical Research Procedures

Bible

Religion 211, 212 Introduction to New Testament

History of Religion

Religion 241, 242 Latter-day Saint History

Theology

Religion 230, 231 The Gospel in Principle and Practice

Religion 232, 233 Missionary Approach to the Gospel

Religion 234, 235 Missionary Approach to the Gospel in French

Religion 236, 237 Missionary Approach to the Gospel in German

Religion 238, 239 Missionary Approach to the Gospel in Spanish

- C. Juniors and seniors who have completed the required courses and transfer students who completed at least two years at B.Y.U. may choose one of the following courses to satisfy the religion requirement:**

Bible

Religion 301, 302 Introduction to the Old Testament and Its Teachings

Religion 401 Israel's Prophets

Religion 411 Life and Teachings of Jesus

Religion 412 Paul and the Apostolic Church

Church Administration

Religion 361, 362 Genealogy

Religion 365 Applying Gospel Principles in Scouting

Religion 460 Priesthood, Church Government, and Welfare

History of Religion

Religion 441, 442 History and Doctrine of the Church

Religion 451 Christian History through the 15th Century

Religion 452 Christian History after the 15th Century

Religion 453 World Religions

Religion 454 Historical Setting of Mormonism

Scripture

Religion 324, 325 The Doctrine and Covenants

Religion 327 Introduction to the Pearl of Great Price

Religion 421, 422 History and Teachings of the Book of Mormon

Theology

Religion 331, 332 Analysis of L.D.S. Teachings

Religion 435 Mormonism and Modern Scientific Thought

Religion 438 Your Religious Problems

- D. Graduate courses (catalog numbers 500 and above) and philosophy courses do not satisfy the general education requirements in religion.**
- E. See "Devotional Assemblies" in the "List of Courses" section of the catalog for information on devotional credit.**
- F. Rules Regarding General Education Religion Requirements**

1. Freshman and Sophomore Registrations

Although students at B.Y.U. may register for more hours in religion than required in the freshman and sophomore years and courses thus taken may count as elective credit toward graduation, no more than 10 hours in religion can be accumulated in the freshman and sophomore years toward the fulfillment of the University general education requirement in religion. A student must complete 6 hours toward the University requirement during the junior and senior years, part of which may be satisfied by devotional credit.

Devotional credit may not be applied toward the general education requirement in religion until the junior or senior year.

2. Transferees from L.D.S. Colleges

Transferees from Ricks College, the L.D.S. Business College, and the L.D.S. Church College in Hawaii have their credit in religion appraised as if it had been taken at B.Y.U., so far as the above rule is concerned. However, they may transfer no more than 6 semester hours for one year's work, or a maximum of 10 semester hours for two years' work, toward the satisfaction of the general education requirements in religion. (See "5" below.)

3. Transferees from Colleges Having L.D.S. Institutes

Transferees from other colleges who present college transcripts of credit for Bible studies taken at L.D.S. Institutes of Religion shall receive full credit for such courses as if they had been taken at B.Y.U. (See "5" below.)

4. Transferees from L.D.S. Institutes

Transferees presenting institute credit in religion for courses other than those accepted by the adjacent college will be appraised as follows:

(a) The credit will be accepted on transfer only if the institute director certifies that the course was taken for college credit and was conducted in accordance with college standards, and (b) providing the student does not present more than the maximum number of hours acceptable at B.Y.U. for a single semester when combining his college and institute credit. If the combined credit earned at a college and institute in a given quarter or semester exceeds that permitted at B.Y.U.—17 semester hours—the student must indicate to the Office of Admissions and Records the courses for which he desires to receive credit up to the prescribed limit. (See "Limitation on Credit in One Semester," University Catalog.)

(c) A student may not transfer to B.Y.U. from institutes more than six semester hours for one year's work, more than ten semester hours for two years' work, or more than 14 semester hours for three or four years' work toward the satisfaction of the general education requirement in religion.

5. Fifth-Year Students

Students taking a fifth year of college work will be held to the requirements of the catalog, namely two credit hours in religion for each semester in residence up to a total of sixteen semester hours.

6. Two-Year Degree-Seeking Students

Students working toward special two-year degrees or certificates must satisfy the University requirement of 2 hours' credit in religion for each semester they are in residence up to the maximum of 16 semester hours.

7. Special Students

A special student must present one hour of credit in religion for each eight hours of collegiate work completed as a special student. For any term in which such a student registers as a regular student (ten hours or more) he must present two hours of credit in religion. The special student should keep the ratio of one hour of religion for each eight hours of collegiate work completed as a special student current from year to year and shall be required to keep the ratio current at the end of every two-year period.

8. Summer School

A student is not required to register for a course in religion in Summer School; however, if he intends to apply the summer work toward graduation, he must present 1 hour of credit in religion for each 8 hours of summer work and 2 hours of credit in religion for each full summer's work in which he registers for 10 hours of credit or more (until he completes the requirement of 16 semester hours of credit in religion).

9. Definition of an Undergraduate

A student will be considered an undergraduate, for the purpose of applying the above rules, until either he has received his undergraduate degree or has completed the requirements for graduation.

10. Students Required to Study off Campus

Students who do part of their collegiate work off campus under the requirements of their respective departments will be required to have two hours' credit in religion for such semesters as they are off campus only when the University provides opportunities for the taking of such courses.

11. Bible Credit from Non-L.D.S. Colleges and Universities

Transfer students coming to B.Y.U. and bringing Bible credit obtained from accredited non-L.D.S. universities and colleges will have this credit accepted by B.Y.U., and it will be applied as elective credit toward the total of 128 hours required for graduation. However, regardless of the amount of Bible credit presented, it will not satisfy the general education requirement in religion. Such transfer students are required to obtain 2 hours in religious instruction for each semester in residence on the B.Y.U. campus.

12. Requirement in Religion for Credit Completed at Extension Centers

When credit which is completed at Brigham Young University Extension Centers is applied toward graduation, the student must have completed two hours of credit in religion for every sixteen hours of credit which is applied toward graduation, up to a maximum of twelve hours of credit in religion.

Social Science. Five semester hours are required. Courses must be selected from at least two of the following departments.

Agricultural Economics 101 (3) Economics and Agriculture

Anthropology 101 (3) Introductory Anthropology

Anthropology 111 (3) Cultures of the World

Economics 101 (3) Survey of Economics

Economics 111, 112 (3 ea.) Introduction to Economic Principles and Problems

Economics 341 (3) Comparative Economic Systems

Economics 358 (3) International Trade and Finance

Geography 101 (3) Introduction to Geography

Geography 120 (3) Geography and World Affairs

Geography 231 (3) Economic Geography

Geography 351 (3) North America

*Geography 441 (3) Political Geography

Geography 460 (3) Europe

*Human Development and Family Relationships 210 (3) Child Development

HDFR 360 (3) Achieving Success in Marriage

*HDFR 361 (3) Family Relationships

Political Science 105 (1) Current Affairs

Political Science 110 (3) American Government

Political Science 111 (3) State and Local Governments

Political Science 112 (3) Foreign Governments

Political Science 115 (3) Introduction to International Relations

Political Science 210 (5) The American System of Government (Honors Program)

Political Science 212 (5) Comparative Governments and International Relations (Honors Program)

Psychology 111 (3) General Psychology

*Psychology 320 (2) Psychology of Childhood

*Psychology 321 (2) Psychology of Adolescence (Either Psychology 320 or 321—not both—may apply.)

*Psychology 322	(2)	Psychology of Adult Life
*Psychology 350	(3)	Introduction to Social Psychology
Recreation 337	(2)	Philosophy of Recreation
Sociology 111	(3)	Introductory Sociology
Sociology 112	(3)	Modern Social Problems
Sociology 125	(2)	Applied Sociology
Sociology 350	(3)	Introduction to Social Psychology
Sociology 389	(3)	Social Aspects of Mental Health

* These courses have prerequisites.

Revised Requirements for Freshmen Entering Fall Semester 1962 and Thereafter. Beyond the general education requirements outlined above, all students who entered B.Y.U. in the fall of 1962 and thereafter and all transfer students who will graduate in the Spring Commencement of 1966 and thereafter must complete an additional nine semester hours: either (a) training equivalent to twelve semester hours of college credit in one foreign language, three of which may be counted as general education credit in humanities (hence, a nine-hour addition); or (b) training equivalent to nine semester hours of college credit in specified mathematics, statistics, logic, and science courses. Completing either (a) or (b) will qualify a student for either the B.A. or the B.S. degree, whichever is appropriate in his area of study.

The following courses have been approved to satisfy the mathematics, statistics, logic, and science requirements for a B.S. or B.A. degree:

MATH	STATISTICS	LOGIC	SCIENCE
All college level courses numbered 105 or higher	Statistics 221	Hist. & Phil. of Rel. 381	Bacteriology—all college level courses
Accounting 232	Statistics 241	Hist. & Phil. of Rel. 382	Botany 110, 276, 321, 331, 376, 440, 450
Accounting 332	Statistics 330	Hist. & Phil. of Rel. 473	Zoology 276, 230, 261, 330, 363, 365, 376, 451
	Statistics 331	Physics 300	Chemistry—all college level courses
	Statistics 432		Physics 105, 106, 201 and all numbers above 201
	Statistics 434		Geology 111, 112, 214, 252, 501
	Statistics 531		Psychology 374

At least one course must be selected from an area other than that in which the student is majoring. This means that all nine hours may come from a department other than one's own major area. The same course cannot satisfy the general education and also the mathematics, statistics, logic and science requirements.

Graduation Requirements

Total Credit. Beginning with Spring Commencement of 1966, students receiving a bachelor's degree from Brigham Young University must complete a minimum of 128 semester hours of credit.

Upper Division Credit. A minimum of 40 semester hours of upper division credit is required for a bachelor's degree.

Major Requirements. At the time of his graduation a student must have completed at least 20 semester hours in his major department and must have satisfied the departmental requirements for a major in that department. A minimum of 10 semester hours of B.Y.U. on-campus credit is required in the major field.

Minor Requirements. The student also must complete a minimum of 14 semester hours in collateral or minor subjects selected from courses approved for this purpose by the department or departments offering these courses and approved by the chairman of his major department.

A minor may be distributed over more than one department providing the major department specifies the content of such a minor from properly approved courses and has the program approved by the Curriculum Committee.

Residence Credit. In order to receive a baccalaureate degree a student must earn a minimum of thirty semester hours on the Brigham Young University campus at Provo.

Exception:

If a student completes ten semester hours at Brigham Young University extension residence centers or at L.D.S. institutes of religion, twenty semester hours of work completed on the University's Provo Campus as a matriculated student will satisfy the residence requirement.

Grade-point Average and Credit Restrictions. In order to become a candidate for a baccalaureate degree, a student must obtain at least a 2.0 (C) cumulative grade-point average by the close of the semester preceding the semester in which he plans to graduate.

Not more than twenty-four of the total hours required for the baccalaureate degree may be correspondence credit.

Not more than eighteen hours of "D" grade credit may be applied toward graduation.

All incomplete grades must have been removed from the candidate's record at least **four weeks** prior to graduation.

General Education Requirements.

Semester Hours

American history and government	3
Biological science	6
English composition	6, 4 or 3
Health	2
Humanities and fine arts	8
Physical education	2
Physical science	6
Religion (2 hours per semester in residence)	16
Social science	5
(See section titled "General Education Program" for additional information.)	

Bachelor of Arts Degree. A candidate for the Bachelor of Arts Degree is required to complete training equivalent to 12 semester hours of college credit in one foreign language.

Bachelor of Science Degree. A candidate for the Bachelor of Science Degree must complete training equivalent to nine semester hours of college credit in the specific mathematics, statistics, logic, and science courses which will aid him in developing precision in thinking, especially in quantitative thinking. (See "General Education Program" for specific courses.)

Bachelor of Engineering Science Degree. A candidate for the Bachelor of Engineering Science Degree must complete the required courses in one field of engineering and must have a total of 154 semester hours of credit.

Bachelor of Music Degree and Bachelor of Fine Arts Degree. A candidate for either of these degrees may obtain specific information as to requirements from the dean of the College of Fine Arts and Communications.

Junior English Proficiency Examination. Each student with more than sixty semester hours of credit who has completed his freshman composition requirement must take the Junior English Proficiency Examination during the first semester he is eligible for it. If he fails this examination, he must take a noncredit remedial course during the next semester he is a full-time student to correct his deficiencies before he may take the examination again. Passing this examination is a graduation requirement.

Since each student should have completed this examination requirement during his junior year, application for graduation will not be considered until the applicant has passed the Junior English Proficiency Examination. The

examination is scheduled six times each year: the Saturday of the first full week of each semester, of each second term of the semester, and of each term of summer school.

Transfer Credit Which Completes Requirements for Graduation. If a student is to receive a degree from Brigham Young University but is completing his last academic work for that degree at an institution other than B.Y.U., the work at that institution must have been completed prior to the date of the Brigham Young University graduation exercise at which the student receives his degree.

Application for Graduation. Application for graduation is made by obtaining the appropriate form from the Office of Admissions and Records. Those students expecting to graduate in June should file the completed form with the Office of Admissions and Records not later than January 15 and candidates for August commencement, not later than March 15.

Prior to applying for graduation, a student must have satisfied the entrance requirements to the University.

Students who are completing two-year certificate programs must also make application for graduation and satisfy the University's entrance requirements.

Attendance at Commencement. Each individual graduating from the University must attend the commencement exercises unless officially excused under the authority of the President of the University. The request to be excused must be presented in writing at least two weeks prior to commencement—extreme emergencies of either illness or death in the family being the only exceptions to this requirement. Students not officially excused from commencement will not receive their degree until they personally attend a later commencement.

Change in Graduation Requirements. The University reserves the right to change the requirements for graduation, and a candidate for graduation will be required to comply with all changes pertaining to the uncompleted portion of his course.

Exception to Graduation Requirements

Following is an exception to graduation requirements for students who entered B.Y.U. prior to fall 1962 and have had an interruption in their college education:

Students who entered B.Y.U. prior to fall 1962 and have had an interruption in their education may graduate with 124 semester hours total credit and without satisfying the new nine-hour requirement in mathematics, statistics, science, and logic, or the new twelve-hour requirement in one foreign language until Spring Commencement 1969. For Spring Commencement 1969 and all subsequent commencements, all students must meet all requirements.

Scholarship Recognition

In acknowledgement of outstanding scholarship academic recognition is granted to certain bachelor's degree candidates. The announcement of such awards is made at the annual commencement exercises.

There are two designations in recognition of high scholarship: graduation **magna cum laude** and graduation **cum laude**. The award of **cum laude** is made on the basis of excellence shown in work up to, but not including, the second semester of the senior year.

A student receiving either type of recognition must rank among the highest ten per cent in his graduating class. Graduation **magna cum laude** is awarded to the highest three per cent. Graduation **cum laude** is given to the next seven per cent.

The University will post and publish at the close of each semester of the regular school year the names of the students who have carried a minimum of 15 credit hours and earned a grade-point average of 3.5 or above in all classes. Those with grade-point averages of 3.8 and above will be given special recognition.

University Fees

The University reserves the right to change these figures without notice. All students who register will be expected to pay tuition and fees prior to or at time of registration.

Approximately three-fourths of the cost of operating the University is paid from the tithes of the L.D.S. Church. Therefore, students who are Church members, or their families, already have made a monetary contribution to the operation of the University. To equalize this burden somewhat it is necessary to charge nonmembers a higher tuition. Even this higher total payment, however, covers less than half of the total educational cost of nonmembers of the Church.

Tuition and General Fees

L.D.S. Church Members, full time (over 9 credit hours)

	First Semester	Second Semester	School Year
Tuition and Fees	\$160	\$160	\$320

Nonmembers, full time (over 9 credit hours)

	First Semester	Second Semester	School Year
Tuition and Fees	\$215	\$215	\$430

Part-time Students (9 credit hours or less per semester, except graduate students)

(The tuition and fees paid as a part-time student do not entitle one to health service or student activity privileges.)

	L.D.S. Church	
	Members	Nonmembers
Minimum tuition and fees	\$ 31.00	\$ 43.50
3 credit hours	43.00	60.00
4 credit hours	55.00	76.50
5 credit hours	67.00	93.00
6 credit hours	79.00	109.50
7 credit hours	91.00	126.00
8 credit hours	103.00	142.50
9 credit hours	115.00	159.00

The charge for noncredit courses or for auditing courses is the same as for credit courses. Noncredit courses taken by part-time students will be assessed on the basis of hours involved in lecture classes. For example, three hours of lecture a week would be considered three semester hours and would be charged for accordingly. Therefore, if a student were taking 8 credit hours plus a noncredit class involving two or more lecture hours per week, he would be considered a full-time student and must register as a full-time student. For courses in which no lecture hours are involved—for example, doctoral dissertations—tuition and fees will be handled on an individual basis, to be resolved later.

A fraction of an hour is counted as a full hour for assessing fees.

Late Registration Fee

Late registration fees will be assessed all regular and special students for failure to complete registration on scheduled dates. No exception is made regardless of reason for being late.

1. First five regular school days following the scheduled registration date \$ 5.00
2. After the fifth day following scheduled registration date 10.00

Late fees for special students will be assessed at 50 per cent of the rate for regular students.

Any student whose check is dishonored by his bank will be charged a handling fee of \$5.00. If the check was for tuition, there will be an additional charge of the late fee in effect at the time the check is redeemed.

Refunds—College Students

In the event of withdrawal by a student, a refund will be made on the basis of a charge of \$10 (\$5 for a part-time student) even though the student does not complete registration or attend school, plus a per-day charge of 1.4 percent of the total tuition and fees paid or payable for the semester. The days charged for will be the school days beginning with the first day of the semester in which classes were held following the date on which the student registered, to the day on which the student reported his withdrawal to the Office of the Dean of Students, both days inclusive.

Any refund due a student because of withdrawal from school will be made only by check, through the mail, two weeks from the date on which the student reported his withdrawal and surrendered his receipt or activity card to the Office of the Dean of Students.

No refund will be granted to a student who is requested to withdraw for scholarship or other causes.

No refunds will be made directly to an unmarried student under twenty-one years of age unless the student has the written permission of his parents or legal guardian.

Miscellaneous General Fees and Fines

Graduation fee, bachelor's degree (only 50% refundable if degree is not obtained)	\$ 10.00
Graduation fee, master's or doctor's degree (only 50% refunded if degree is not obtained)	20.00
Late application for graduation (for those who apply after January 15 for June commencement and after March 15 for August commencement)	3.00
Graduate student service fee (for graduate students using University facilities without formal registration for University classes)	27.00
General College two-year terminal certificate	5.00
Late orientation fee (charged all freshman and sophomore students registering at the University for the first time who do not report to the campus at indicated time on the officially scheduled day for placement tests and orientation work preliminary to registration day)	3.00
Identification photo50
Change of registration fee, for each change slip presented after the first week of each semester	1.00
Change of grade fee (unless the change is the responsibility of the University)	3.00
Examination, special equivalency, per credit hour (the maximum fee in any one subject shall not exceed \$45)	7.50
Examination, repeat foreign language, for advanced degree	10.00
Duplicate activity card	1.00
Transcript fee	1.00
(\$1.00 for first copy on every order, plus \$.50 for each additional copy)	
Automobile registration and parking fee:	
One semester	4.00
Academic year	7.00
One term of Summer School	2.00
Both terms of Summer School	3.00
Traffic violation fines	Variable, according to violation
Thesis binding (4 copies)	11.00 to 13.00
Registration in Evening School. (All daytime students will be required to pay an additional fee of \$3 per credit hour for all hours carried under the Evening School Program.)	

Fees for Instruction in Music

Reservation for private music instruction, arranged by the student with the teacher concerned, is made by the semester only. Payment of the fee in full is made only at the treasurer's office at the time of registration or prior thereto.

List of instructors and schedule of fees may be obtained from the Music Department.

Refunds—Fees for Instructors in Music

Students who withdraw from registration for private instruction before the semester begins or during the first week of the semester will receive a refund of the total amount paid.

Students who withdraw after they have begun their private instruction will be charged 10 percent of the total fee, the full cost of each lesson taken or each lesson missed without notifying the teacher, and one-half the cost of the remaining lessons in the course.

Applications for refunds are made at C-550 Franklin S. Harris Fine Arts Center.

Fees for Private Instruction in Speech Correction

Students who desire individual faculty attention to speech and voice problems should register for Speech 105-p for one credit hour per semester. This course may be repeated for a total of four semester hours of credit. Payment of the fee in full is made only at the Treasurer's Office at or prior to the time of registration.

Speech and hearing rehabilitation service is given free of charge to regularly enrolled university students, provided they register for Speech 60 (Remedial Speech).

A list of instructors and schedule of fees may be obtained from the Speech Department.

Fees for Departmental Facilities and Services

English 15 (Remedial English for juniors)	\$15.00
Food and Nutrition 240, 340 (Menu planning—meal service)	4.50
Food and Nutrition 310	4.00
Health Education 110 (Driver education)	10.00
Horticulture 112 (Flower arrangement)	10.00
H.D.F.R. 322	4.50
H.D.F.R. 422	9.00
Tchr. Ed. 449 (Deadlines: Fall Sem. Oct. 31; Spring Sem. March 31)	45.00
Tchr. Ed. 449 Late Fee (Assessed if application is completed after deadline)	10.00
Tchr. Ed. 479 (Deadlines: Fall Sem. Oct. 31; Spring Sem., March 31)	45.00
Tchr. Ed. 479 Late Fee (Assessed if application is completed after deadline)	10.00
Music 106 (Group organ instruction)	10.00
Music 368, 370, 372 (Woodwind, brass and string workshops)	5.00
Nursing 211, 212 (Fundamentals laboratory)	1.50
Nursing, public travel	15.00
Physical Education 127 (Bowling—payable directly to bowling alley. Covers all expenses.)	11.00
Physical Education 135, 136 (Skiing)	15.00
Physical Education 137 (Hiking)	5.00
Physical Education 138 (Outing activities)	5.00
Physical Education 160, 161 (Swimming)	10.00
Physical Education 164 (Life saving)	10.00
Physical Education 165 (Water safety instruction)	10.00
Physical Education 166 (Canoeing)	7.50
Physical Education 233 (Sports fundamentals) majors—men	6.00
Physical Education 235 (Sports fundamentals—swimming) majors—men..	10.00
Physical Education 543 (Athletic conditioning and injuries)	2.50

Rentals

Organ rental, one hour each day, per semester	\$15.00
Harpichord, clavichord rental, one hour each day, per semester	10.00
Harp rental, one hour each day, per semester	10.00
Piano rental, one hour each day, per semester	7.50
Each additional hour each day, per semester	6.00
Practice room without piano, one hour per day, per semester	4.50
Each additional hour each day, per semester	3.00

Recorder rental, per instrument, per semester, tenor and bass	3.00
Recorder rental, per instrument, per semester, alto	2.00
Recorder rental, per instrument, per semester, soprano	1.00
Locker rent (McKay Building and Eyring Science Center):	
1 semester	1.50
2 semesters	2.50
2 semesters and Summer Session	3.00
Key deposit	1.00
Replacement of lost key	1.00
Locker rent (for high school students, Education Building) school year	1.50
Fifty cents is returnable on return of key. If students share a locker, there is an additional 50c for each additional key issued. The 50c for each key is refunded on return of key.	

Deposits

Gymnasium towel check and padlock deposit (Maximum refund is \$2.50) ..	\$ 3.00
Industrial education	1.00
Chemistry (Each laboratory class)	1.00
Civil Engineering 202, 203, 204	1.00
Air Science (All AFROTC students. Fifty cents will be retained for flight insurance.)	14.00

Fees for Lab Schools

Secondary Schools

Senior high school—10th, 11th, and 12th grades	\$35.00
Junior high school—7th, 8th, 9th grades	25.00
Special students in secondary laboratory school, per unit	9.00
Secondary laboratory school students who register any time during the first semester shall pay the full year's fees.	

Elementary Schools

Kindergarten to the sixth grade, for the full year	\$20.00
Elementary laboratory school students who register any time during the first semester shall pay the full year's fee.	

Late Fee in Laboratory Schools

A late fee of \$2.00 will be charged all junior and senior high school students who register after the first week.

A late fee of \$1.00 will be charged all elementary training school students who register after the first week.

Refunds—Laboratory Schools

A refund of \$25.00 will be made to any senior high school student who withdraws during the first or second week of the first semester. A refund of \$15.00 will be made to any student who withdraws after the second week and at or before the end of the semester, but no refund will be made thereafter.

A refund of \$15.00 will be made to any junior high school student who withdraws during the first or second week of the first semester. A refund of \$10.00 will be made to any student who withdraws after the second week and at or before the end of the first semester, but no refund will be made thereafter.

A refund of \$5.00 will be made to any elementary training school student who withdraws before the beginning of the Christmas holidays, but no refund thereafter.

No refund will be granted to a student who is requested to withdraw for scholarship or other cause.

The activity or receipt card must be surrendered when a refund is received.

Family Life Education Nursery School

(Preschool laboratory operated by the Department of Family Life Education)	
Fee per child, per semester	\$30.00

Arrangements for registering students in the preschool laboratory should be made with the Department of Family Life Education prior to payment of fees.

Student Financial Assistance

Scholarships, Awards and Grants

Scholarships and Awards. The University annually awards to high school graduates, to students transferring from other colleges or universities, and to Brigham Young University students a significant number of scholarships and awards. Recipients for scholarships are selected on the basis of demonstrated academic ability, character, leadership, and service activity. Candidates for awards are determined on these same bases, but also are considered on the basis of outstanding skills in speech, drama, music, art, dance, journalism, and foreign language. Students who have served in major and responsible positions of leadership in high school may be eligible to receive a leadership award.

A scholarship or award may be withdrawn at any time at the discretion of the Undergraduate Scholarships and Awards Committee if the recipient has failed to comply with the spirit and letter of the original terms of the scholarship or award.

All scholarships and awards are under the jurisdiction of a central committee which alone has the authority to promise or grant an award. Official notification is mailed by the president of the University. Application should be made to the chairman of the Scholarships and Awards Committee.

Graduate students are eligible for scholarships, fellowships, and grants. For further information see the Brigham Young University Graduate School Catalog.

Grants-in-Aid

Through the Student Financial Aids Office the University awards a limited number of grants-in-aid to deserving students who have maintained a commendable academic record and who are in critical financial need. Grants-in-aid, as well as scholarships, are applied toward the payment of tuition and general fees.

Athletic Grants-in-Aid. The University also awards grants to selected athletes who qualify under the rules and regulations of the Western Athletic Conference. These grants may include part or all of the students' commonly accepted educational expenses as defined by the N.C.A.A. A student athlete must meet either of the following recommendations:

- a. If a freshman, he must have been rated academically as in the upper two-thirds of his high school graduating class. For the first year such an award will be made for the entire school year.
- b. If not a freshman, the student must be in good academic standing and not on probation. Such an award will be made on a semester basis.

Student Loans and Financial Aids

A student entering the University should have made financial arrangements to cover his school expenses and should have on hand enough funds to cover his obligations during the first semester. Limited funds are available to help students remain in school when financial emergencies have arisen and personal or family resources are not available.

Short-Term Loans. Short-term loans are available for emergency assistance for tuition, books, fees and other school expenses to full-time day students who have completed at least one quarter or one semester of successful work at B.Y.U. These loans are made in small amounts for immediate requirements. Repayment usually is required within the current semester. Such loans are intended primarily for students who will have sufficient resources to carry them through the year

but who may not have these resources available early enough to make the required payments for tuition, books, fees, and other school expenses.

Church Student Loan Fund. The Church of Jesus Christ of Latter-day Saints makes aid available through a long-term loan program by which loans may be made to worthy full-time L.D.S. students who have completed at least one quarter or one semester of successful work at B.Y.U. and who are in critical financial need of tuition, books, fees, and other school expenses. Loans may be made each year in amounts not in excess of \$200 for freshmen, \$400 for sophomores, \$500 for juniors, \$500 for seniors, and \$500 for graduates. The maximum cumulative loan to any student cannot exceed \$2,100. The student may be permitted to delay making repayment until after he discontinues his full-time status at B.Y.U.

Special Student-Aid Fund. Through the generosity of interested friends of B.Y.U., contributions have been made and a limited fund is available to aid deserving students who are in critical need of small amounts of money and who are unable to make repayment.

Application. Information regarding financial aids and application forms is available in the Financial Aids Office. Before aid is granted, each applicant will be interviewed and careful consideration will be given to his needs.

Student Employment

The Placement Center assists students in finding part-time employment, including help not only in placing them in positions on the University campus but also in finding part-time employment off campus and in finding work for board and room.

Students are encouraged not to attempt to earn their entire way through school. Such a program leaves little time for academic work (see scholarships). Furthermore, it is important to note that there is a limit on the number of hours which a student may work on campus.

Students needing employment are urged to register with the Placement Center as soon as possible after they arrive in Provo and are available for work. Need weighs most heavily in deciding who will receive leads for jobs. Hours available and possession of skills required by employers are also very important. Inasmuch as the number of students seeking part-time work is very high, those whose need is great are requested to report regularly at the Placement Center after filing their initial applications.

Students from foreign countries are required to obtain a work permit before they may accept employment. Such students may receive assistance from the foreign students adviser in obtaining the necessary permit.

Estimated Cost of Attending B.Y.U.

The expense of a year's study at Brigham Young University is surprisingly reasonable. It will depend a great deal on how much a student can spend or wants to spend. Basic minimum costs for a two-semester school year are as follows:

	L.D.S.	
	Member	Nonmember
Tuition and fees	\$ 320	\$ 430
Books and supplies	75	75
Board and room	615	615
Personal expenses	100	100
	<hr/>	<hr/>
	\$1,110	\$1,220

The average college expenses at public and private colleges for the nation are nearly \$2,000. As a general rule private college costs are higher.

The estimate above does not provide for an automobile or clothing or transportation from distant points. The cost will obviously vary with married or single students and with young men and young women. For those doing their own housekeeping, either on or off campus, the cost of board and room can be materially reduced. Except for those who travel back and forth to their homes each day, an automobile is unnecessary and often a hindrance to proper study.

Student Housing

Learning to live harmoniously with other people under the right kind of living conditions plays a vital part in a college education. Students living in groups, working, studying, and enjoying recreation together gain much from each other. The conversations, good fellowship, and activities experienced in group living contribute to a person's whole development. Participation in democratic, self-governing living activities brings about a phase of education which can be gained in no other way.

The Office of Student Housing, established to assist students with their housing needs, is located in the Abraham O. Smoot Administration and General Services Building. All inquiries or administrative problems relating to housing needs should be referred to this office.

Campus Housing

Residence Hall Supervision

Campus housing is organized into two areas: namely, men's and women's. Each area is under the supervision of a person with professional training and experience for this type of work. Under these individuals, each residence hall is directed by a competent adult head resident who lives in the hall. (This may be a couple or a single woman.) Assisting each head resident are several senior residents—mature, advanced students—who live with the student groups. This gives each student a very close contact with the residence hall staff. Each student is known personally by the staff and has someone immediately available to assist him with normal student problems. The residence hall staff carries out a residence hall program designed to provide each student with experiences in democratic self-government, development in acceptance of responsibilities that go with maturity and independence, and assistance in learning the art and science of human relationships in working and living with others. The staff assists the student to achieve a sense of belonging and to develop social competence through planned social and recreational programs. Head residents are available for general counseling. They carry out the residence hall program in cooperation with other University academic services.

Applications

A student who plans to enroll at the University and live in a University residence hall should make inquiry to the Office of Student Housing about a year in advance. A housing application form will be sent to each inquiring student. A \$10.00 application fee is required and should be enclosed with the completed application form when it is returned to the Office of Student Housing. A residence hall assignment and appropriate agreement forms are prepared on a basis of the date of receipt of the application form by the housing office and are mailed in the late spring and early summer.

Acceptance to University

The validating of any campus housing reservation is contingent upon the student's official acceptance and admission to the University. For admission to the University contact the Admissions Office, A-183 Abraham O. Smoot Administration and General Services Building.

Rental Agreements

A student planning to live in campus housing may expect to sign a rental agreement for the accommodations he will occupy. He should be prepared to live by the terms of this agreement once he has signed and returned it to the Office

of Student Housing. Misunderstanding and financial loss can be avoided by a student if he will read and familiarize himself with the terms of the agreement before signing.

Time of Arrival

Residence halls are not open to a student prior to the announced opening date, usually the day before freshman orientation. The University does not advise a student who is going to live in campus housing to arrive before that date. It is unwise for a student with nothing to do to live in a hotel or motel where there is no University supervision.

Residence Halls for Women

Housing for women is provided in 24 Heritage Halls. These are apartment-type buildings. Each apartment consists of a combination kitchen-dining-study room arrangement, three bedrooms and a bath. In addition, there are large living rooms, a recreation room, head resident apartment, and laundry and storage facilities in each building. Six girls occupy an apartment and live cooperatively, preparing their own meals. The apartments are completely furnished except for bedding, kitchen utensils, and dishes. The facilities are excellent and offer a high standard of living for college students. The approximate annual rate for these accommodations is \$250.00. Food is purchased cooperatively by the residents of each apartment.

Help in the homemaking experiences of budgeting, buying, meal planning, and the selection, care and construction of clothing is available from specialists who are assigned to Heritage Halls. In addition, a specialist is available to assist students in planning social activities, developing recreational skills, and learning wise use of leisure time.

The University operates three residence halls for women where board and room are provided: Amanda Knight Hall, Budge Hall, and Merrill Hall. The halls, completely furnished, provide every modern convenience, including well-planned food service. A trained head resident lives in each hall. The approximate annual rate for these accommodations is \$615.00.

Each woman student desiring to live on campus should consider carefully the type of accommodations desired in view of her economic needs, time available for activities within her housing situation, and type of experience desired. Agreements are made for the academic year, and moving from one type of accommodation to another during the year is difficult to arrange.

Residence Halls for Men

Board and room services are provided in Allen Hall, located one block from campus. This hall provides sleeping rooms, dining hall, living and social room, study room, head resident apartment, and adequate laundry and storage rooms.

Residence Halls for Men and Women

Board and room services for men and women are provided in seven new buildings known as Helaman Halls. These buildings form a beautifully designed residence hall development. There are seven residence hall buildings conveniently grouped around an attractively planned and developed central building. Each residence hall accommodates 234 students, with two persons sharing each bedroom. In addition, living rooms, study rooms, central shower areas, recreational rooms, adequate laundry and storage facilities, and a head resident apartment are found in each building. These halls provide some of the best student living experiences offered on any university campus. The central building features spacious dining rooms and a snack bar, providing the excellent food service for which B.Y.U. is noted. This building also contains beautiful living rooms, recreational areas, administrative offices, and other management facilities such as mail rooms and laundry and dry cleaning pick up stations. The approximate annual rate for these accommodations is \$615.00.

New residence halls for men and women, completed in the fall of 1964, accommodate 1,350 students, with two students sharing each room. Board and room is provided, cafeteria style.

Graduate Homes for Men

Board and room services for a limited number of single graduate men are available in large University homes used exclusively for graduate students. They are adequately equipped and provide for the specialized needs of the graduate student. The approximate annual rate for these accommodations is \$615.00.

Apartments and Homes for Married Students

Family accommodations for 348 married couples and their children are provided in housing developments known as Wyview Village and Wymount Terrace. All units in married-students' housing are assigned according to family size.

Wyview Village consists of 150 prefabricated homes purchased in 1956 from a federal government air base and moved to a site adjacent to the campus. There are 100 two-bedroom and 50 three-bedroom homes. The monthly rental rates approximate \$50.00 for the two-bedroom and \$55.00 for the three-bedroom homes. In addition, each family pays for its electricity.

Wymount Terrace—which includes 24 residence buildings, an administration building, and 3 laundries—consists of 462 apartments. Of this number 198 apartments will house married students. There are 48 one-bedroom units, 24 one-bedroom-study units, and 126 two-bedroom units. The monthly rental rates approximate \$57.50 for the one-bedroom units, \$61.50 for the one-bedroom-study units, and \$67.50 for the two-bedroom units. In addition, each family pays for its heat and electricity. Balconies or porches for all apartments open on courtyards. Apartments have bedrooms, an all-tile bathroom, kitchen with modern appliances, including garbage disposal units, gas ranges, and electric refrigerators, and an attractively decorated living room.

The Residential Housing Office can assist those who desire to live off campus to find a suitable apartment in the Provo community.

Residential Housing

All students living off campus are required to live in University-approved housing. The Residential Housing Department of the Office of Student Housing maintains up-to-date listings of approved residences. This office is established to assist students upon their arrival in Provo to find suitable quarters if they desire to reside in the community.

Residential housing consists of apartments, rooms with kitchen privileges, board and room, and sleeping rooms located in homes in the community. These facilities are inspected by University representatives to see that they comply with established standards before they are approved for student occupancy. Through the cooperative efforts of landlords and the University, constructive action has been taken to raise the standard of student housing throughout the community. Before making any commitments for residential housing, students should make sure that the place in which they contemplate living has been approved by the University.

Rates

Rates for residential housing accommodations vary with the type of service provided; consequently only a general indication can be given here. Sleeping rooms rent from \$20.00 to \$30.00 a month. Apartment accommodations run from \$20.00 to \$30.00 per month per student. Board and room is available at the rate of \$55.00 to \$65.00 a month. Apartments for married students can be obtained at a rate of approximately \$45.00 to \$70.00 per month.

Student Personnel Services

The Student Personnel Services offices are responsible for the following areas of University life: academic standards, American Indian students adviser, counseling service, counselor for women, foreign students adviser, orientation, scheduling of University facilities, student health service, student organizations and social life, student publications, University standards, and veterans' affairs.

Dean of Students

The dean of students is director of Student Personnel Services. He initiates and recommends to the President and the Administrative Council needed policies and procedures in student life. He administers the program and coordinates the agencies at work on student problems.

Assistant Dean of Students

The assistant dean of students is the director of counseling and advising services for the University. He is director of the University Counseling Service, which provides professional services as outlined in the Counseling Service description below. In addition, he provides leadership in the advising offered by the academic faculty, the housing staff, and other personnel of the University. His primary responsibilities are administering existing programs, providing training and education for counselors and advisers, and recommending policies and procedures in student counseling and advising for the University.

Academic Standards

Students at Brigham Young University are expected to attain the following minimum grade-point average for their particular class in school:

Freshmen (students who have accumulated 31 semester hours of credit or less) are required to maintain a 1.75 (C-) grade average in order to be considered in good academic standing.

Sophomores, juniors, and seniors are required to maintain a 2.00 (C) grade average on all work beyond the first 31 semester hours of credit.

A student receiving a degree from Brigham Young University must have earned a cumulative grade-point average of 2.00 or a 2.00 grade average on all academic work taken after September 1960 before he will be allowed to register for the final semester of work leading to a degree.

Grade-point averages are computed on this basis: "A" equals 4 grade points; "B" equals 3; "C" equals 2; "D" equals 1; and "E," "WE," and "UW" each equal 0.

Categories of academic status are as follows:

Warning. A student whose B.Y.U. cumulative grade-point average is above 2.00 (C) but whose grade-point average for the last semester was below the minimum required (1.75 for freshmen and 2.00 thereafter) will receive academic warning.

Probation. A student whose B.Y.U. record does not meet the minimum requirement and whose record shows a shortage of grade points will be placed on academic probation.

Suspension. A student will be suspended from the University if at the end of any probationary semester his cumulative record at B.Y.U. shows a shortage

of 12 grade points from that required (1.75 for the first 31 semester hours and 2.00 for all remaining hours), and his current semester grade average is also deficient.

A student, whether on probation or not, will be subject to suspension if the Academic Standards Committee at any time determines that he is deficient in his academic achievements.

Readmission. A student who has been suspended from B.Y.U. for academic deficiencies is invited to do work of a preparatory nature in a different environment and setting to qualify him for readmission. He may then submit to the Academic Standards Committee a request for readmission. Preparatory work may include the following:

(1) The completion of 10 semester credit hours of home study or correspondence work with a grade of "C" or above in each course; or

(2) The completion of a typical load of 15 credit hours or more taken all at one time at another institution of higher learning while earning a "C" grade average or above; or

(3) Demonstrating, during a personal interview when at all feasible, that he has had equivalent preparatory work or activity of an academic nature since being suspended from B.Y.U. to substitute for one of the two above-mentioned alternatives.

Students transferring or readmitted to B.Y.U. will be subject to the same academic standards as other students of the same class and standing who are currently enrolled.

Tutoring Service

The student who feels that he might profit from special tutoring may inquire at the Academic Standards Office, where he will receive assistance in making contact with the tutor. Fees for student tutors range from \$.50 per hour for a student in a small group to \$1.50 per hour for individual tutoring. Limited free tutoring is offered by members of service and honorary societies.

American Indian Students Adviser

American Indian students may receive special assistance through the Indian Education Program of the University. Such assistance includes both close personal advisement and financial aid through the Indian Education Award, administered directly by this office. Information and application forms may be obtained by contacting the adviser to American Indian students.

Counseling Service

The administrative officers at Brigham Young University are well aware that new students are faced with many problems as they begin their college life. The primary function of the Counseling Service is to help normal students make realistic decisions regarding their college careers. All entering students are encouraged to make an appointment with a counselor so that they may obtain his professional assistance. The Counseling Service provides the following services for the University: (1) counseling—educational, vocational, and other personal problems; (2) testing; (3) occupational information. The Counseling Service also cooperates closely with those who supervise the study and reading skills program and the University tutoring program.

Counseling. It is primarily the policy of the Brigham Young University Counseling Service to counsel with students who have a variety of problems (educational, vocational and personal-social problems) and who can be helped in a relatively short period of time (about one semester). It is not the intent to engage in long term and/or intensive psychotherapy, but rather to promote the adjustment of students within the University setting. A primary goal of

counseling is to help maturing students accept responsibility for the decisions arrived at in counseling and for their own behavior.

Staff members of the Counseling Service are professionally trained in counseling psychology and related disciplines. Such training enables them to offer professional assistance with problems ranging from the selection of a major and a vocation to rather intense emotional disturbance. Students utilizing the service can be assured of reliable professional assistance and complete confidentiality.

Testing Services. Tests of achievement, ability, interest, and adjustment are given to all students requesting them. The data from these tests are used as a basis for counseling in educational, occupational, and personal problems. The testing service provides psychological test data for the use of counselors and registration advisers, placement tests for various academic groups at the University, and assistance in the preparation, administration, and scoring of subject-matter tests as requested by various departments in the University.

Occupational Information Services. A comprehensive, current collection of essential occupational information is maintained in the Counseling Service library. Current catalogs of the major universities and technical schools are also on file. These materials are available to all students seeking information about particular vocational opportunities or information about employment in general.

Counselor for Women

The counselor for women is a member of the Student Personnel Services Staff and the Counseling Service Staff. She also works with the Coordinator of Student Activities as adviser to student organizations. She is available throughout each day to assist students in solving personal and vocational problems.

Foreign Students Adviser

Services of the foreign students adviser are available to all students from countries outside of the United States. Alien students coming to the University must report first to his office, where they are expected to clear with him.

Orientation

The orientation program of Brigham Young University is designed to assist new students in becoming acquainted with opportunities the University offers and in integrating their skills and abilities with these opportunities.

The processes employed in achieving this objective are as follows:

- a. To help the student feel that he belongs; that he is a member of an institution interested in him as an individual; that the University is also interested in his reaction to his total college environment religiously, socially, and academically; and that his relationships with his fellow students will be satisfactory.
- b. To help the student become more receptive to his learning experience. Discussion groups are employed as a tool to develop healthy attitudes toward the tools of learning and toward the academic courses.
- c. To assist in the initial registration. Faculty advisers are available during this time to help select major fields of study and to help plan courses.

Religious Opportunities

Brigham Young University students have excellent opportunities for participation in religious activities. Among the means available are the following:

Brigham Young University Stakes. The Church is organized into a number of stakes. Each stake has several wards, with each ward having between 200 and 300 members. The stakes and wards are organized specifically to provide students

maximum opportunity for active participation in the program of the Church. Spiritual growth and the development of a strong testimony are goals fostered by the stake and ward organizations, whose programs are closely integrated at all levels with those of the University.

All single students living away from home establish their membership records in one of the wards of the stakes. Married students not living in University housing may attend the University ward or the ward of their choice in the city. Membership records of students remain in the B.Y.U. stakes until they terminate their schooling at the "Y."

Devotional Assemblies. Devotional assemblies, held each Tuesday, enable students to hear messages of spiritual power and depth from carefully chosen Church leaders including many General Authorities of the Church of Jesus Christ of Latter-day Saints.

Student Health Service

The Howard S. McDonald Student Health Center accommodates the health services, comprised of a large out-patient clinic and in-patient unit for cases requiring bed care. The center functions 24 hours daily, 7 days a week during school terms and is available to any regularly enrolled full-time student whose fees include these services for the semester in which he is registered. Summer students are included. Medical care for all eligible students is limited to the facilities and personnel in the health center.

The following services are provided without extra charge:

1. A comprehensive health questionnaire will be completed at registration by all entering freshmen. Questionnaires will be screened, and all students requiring physical examinations will receive them at the health center without charge. Students also may request a physical examination at the health center without extra charge until September 30, 1965.
2. Consultation with general physicians and specialists, by appointment, in the health center during regular clinic hours, 8:30 a.m. to 4:30 p.m. This includes a specialty clinic in orthopedics, general surgery, gynecology, internal medicine, and chiropody, ear, nose, and throat.
3. First-aid treatment at any time.
4. Immunizations as required for small pox, diphtheria, or typhoid.
5. Physical therapy as recommended by a health center physician.
6. Routine laboratory tests.
7. Ten days of bed care in any one semester in the health center, as recommended by a health center physician, after which a minimum charge of \$5.00 per day is made.
8. Within the limits of its personnel and facilities and at the discretion of the director, the treatment of chronic disease suffered by students.

The following services require an additional charge and are supplied to the student at cost:

1. Meals while the patient is in the center.
2. Drugs on prescription of a health center physician.
3. Special diagnostic laboratory tests.
4. Special immunizations, i.e., poliomyelitis, influenza, etc.
5. X-rays other than "screening" films. The health center regularly employs the technical personnel to take x-ray films and a radiologist to interpret them. The student pays only the cost of the materials.
6. After-hour calls made by a physician in the clinic. The student pays \$5.00 for each call. For house calls, the student pays \$10.00.
7. Rental of crutches.
8. Immediate notification of parents or guardian by the health center when a student is taken ill.

Services not available are these:

1. Major surgery or off-campus hospitalization or medical care.
2. Dental service.
3. Obstetric service.
4. Eye refractions, glasses, prostheses, hearing aids, etc.
5. Routine physical examinations.

Student Health and Accident Insurance Program

To complement the services of the Student Health Center a supplemental insurance program is offered to all full-time students. This voluntary program is fully endorsed by the University and provides for a wide range of medical services at minimal costs. Students not otherwise protected by a health insurance plan are urged to accept this excellent plan specifically designed for our students. Full details are available from the health center.

Student Organizations and Social Life

Student activities are organized to offer maximum opportunity for training in leadership and self-government and to provide a well-balanced program of individual and group development. Numerous student organizations have been set up to effectively realize such an objective. All student organizations on the campus conduct their affairs in accordance with a basic philosophy designed "to provide for a broad program of social, cultural, and recreational opportunities in which students are encouraged to participate." Membership is open to students who qualify and remain qualified according to the regulations set up by each organization. All students are urged to become affiliated with some group and thereby derive the benefits that only group experiences can bring. In order to coordinate organizational activity, to eliminate duplication of effort, and to lend continuity from year to year, supervision of student organizations is provided by the dean of students through the office of the coordinator of student activities.

Associated Students. Associated Students, an organization composed of all students who attend Brigham Young University, is presided over by officers elected by them. It seeks to develop interest on the part of every student in those activities which contribute to a more democratic "Y" spirit and to provide opportunities for all students to participate in a well-rounded program of out-of-class activities. However, no student is allowed to participate in out-of-class activity if he is on disciplinary probation or carrying less than a ten-hour academic class load. Through this organization, student traditions are kept alive. All inter-class and intercollegiate activities are fostered under its management, and through it the students publish the "Daily Universe," the student directory, and the "Banyan." The organization also functions as an auxiliary of University discipline through the activities of the Honor Council and the Inter-Organizational Council.

Associated Men. All men students registered are members of Associated Men, designed to promote specific interests of "Y" men and to foster a wholesome atmosphere on the campus.

Associated Women. Associated Women, an organization comprising all women registered in the University, aids and fosters all women's activities. The organization, advised by the counselor for women, is a member of the Western Division of the National Organization of Associated Women Students.

Class Organizations. Members of the four classes and the Graduate School are organized to develop common interests and class spirit as each class proceeds through the University and into the Alumni Association. Meetings of the classes are held periodically, with a limited number of social functions planned by class officers.

Executive Council. The Executive Council consists of the president, vice-president of social activities, vice-president of student relations, vice-president of cultural activities, and vice-president of finance.

Student Senate. The Student Senate, a legislative body consisting of representatives from the entire student body and representatives from the classes, considers studentbody problems and initiates action for the welfare of the student body.

Inter-Organization Council. The Inter-Organization Council is an organization composed of representatives from student organizations to help govern organizational activities. It derives its authority from the Executive Council.

Honor Council. The Honor Council functions as a counseling body with subcommittees to promote the honor system to which all students are expected to adhere.

Geographical Organizations. Geographical clubs are organized to further social enjoyment and acquaintance among students from the same localities. They are particularly helpful to students during the early semesters of school, before these students have found their way into the other social activities of the campus. Such clubs also are helpful in maintaining a close bond of interest between the student and his home.

Professional and Departmental Organizations. The University encourages organizations which bring together persons of similar scholastic and professional interests and render their work more pleasurable and profitable. Each group fosters the activities of the department to which it is allied. Eligibility requirements are those of departmental affiliation and general scholarship as determined by the individual organizations. Fees are minimal. Each organization has a faculty sponsor.

Service Organizations. Several organizations, both for men and women, exist primarily to render service to the University. Eligibility requirements are established by each organization, and each has a faculty sponsor.

Student Publications

Four student-edited publications are sponsored to give every student an opportunity to provide published works for the student body and the University. A full-time adviser of student publications helps students to develop their talents in addition to their classroom training.

Daily Newspaper. The "Daily Universe" is published daily during the regular semesters of the school year; the "Summer Universe" is published twice weekly during Summer School. More than 60 students staff the editorial, advertising, reporting, photographic, and business positions necessary to publish the paper.

Galaxy. A magazine section, edited separately and distributed as part of the "Daily Universe," is published several times yearly. This is a publication designed to discuss opinions, ideas, and interpretations of items which the daily press is unable to explore fully.

Yearbook. The "Banyan," named for an oriental tree which symbolizes widening friendships found on campus, is the students' photographic record of each year. Valuable training in writing, editing, photography, art, and publishing are gained by the 50 members of the staff necessary to publish a 480-page book.

Directory. An annual directory of students and staff of B.Y.U. is published during the first semester each year. Compilation of directory material and sale of the book are handled by White Key, a women's honorary service organization. Other student help needed in advertising sales and business operation is supervised directly by the adviser of student publications.

University Standards

The maintenance of standards of honor and integrity, of graciousness in personal behavior, of Christian ideals in everyday living, of a high standard of morality, and of complete abstinence from alcohol and tobacco is required of every student. The maintenance of standards as stated is applicable both on and off campus, at home or wherever the individual may be as long as he is in student status. Registration signifies a student's willingness to conform his life to these standards.

Any pronouncement of disciplinary measures made by the President of the University becomes a part of these regulations. Violations may make the offender liable to suspension or expulsion from the University.

Veteran's Service

All veterans should have their military experience evaluated for credit by applying to the Office of Admissions and Records.

Korean (P. L. 550). Veterans who had active military duty any time after June 27, 1950, and prior to January 31, 1955, are eligible for veterans benefits under Public Law 550, 82nd Congress. (This law expires January 31, 1965).

All veterans must begin their schooling under the Korean G. I. Bill within three years of their date of discharge or separation from the service. New veterans must make application for eligibility and can do so upon their arrival at the University. It is necessary to bring a copy of veteran's release from active duty, DD 214. A certified copy of a marriage certificate and/or child's birth certificate are necessary for veterans claiming dependents.

Veterans transferring their G. I. benefits from other schools to B.Y.U. must bring a certificate of eligibility restricted to B.Y.U., obtained by making application at the last school attended. Delay will be avoided by beginning transfer proceedings in advance.

War Orphans Education Program (P. L. 634). War orphans must bring a certificate of eligibility restricted to B.Y.U. before entering school under the War Orphan Program. This may be obtained by making application at the nearest Veterans' Administration Regional Office.

For further information concerning any educational benefits problem, please write to Veterans Coordinator, B-234 ASB, Brigham Young University, Provo, Utah.



Artist's drawing of new "Y" Center

Special Academic Programs

Honors Program

Robert K. Thomas, Director (D-243 ASB)

Richard D. Poll, Associate Director (340 M)

The Honors Program at Brigham Young University is a University-wide effort to provide special opportunities and direction for superior students. In supporting such a program the administration and faculty of B.Y.U. have sought to integrate honors work in the various colleges and make possible a more flexible approach to the complete education of its best students.

The Honors Program is administered by a director, an associate director, and an executive committee who are directly responsible to the academic vice-president of the University. The executive committee sets explicit admission standards and advising procedures, keeps the curriculum and development of the program under constant review, and approves substantial individual variations from established policies. The directors carry out the policies of this committee, act as admissions officers, keep the program integrated with the colleges and departments involved, and represent the program to the University administration and faculty. Advising of students is handled by the directors, members of the executive committee, and departmental advisers from certain other departments which are not represented on the executive committee.

Objectives

The Honors Program seeks to assist students with unusual promise to achieve the maximum benefit from their university experience. Among the specific opportunities and challenges which are offered to superior students are the following:

1. Flexibility in programming insofar as course pre-requisites, load limits, and general requirements are concerned.
2. Close association with teachers and other capable students in honors sections of many University courses.
3. An interdisciplinary approach which encourages broader, integrated learning.
4. Independent research and creative activity in the fields of primary academic interest.
5. Stimulating and enjoyable extracurricular contacts with teachers and other students in the program.

In general, the Honors Program hopes to enrich rather than shorten the superior student's academic experience.

Admission

Students seeking admission to the Honors Program may obtain application forms and instructions from the office of the director. Since the number entering the program each year is limited to approximately one hundred, early application is important. Prospective freshmen should have applications and supporting papers in the hands of the director at least five months prior to the opening of their first collegiate term; only in exceptional cases can applications filed during the summer be considered for fall registration.

Those applying must show unmistakable evidence of academic promise on the basis of tests, grades, and recommendations. Special consideration is given to those who include scores on National Merit, College Board, ACT, or similar tests as part of the application.

Candidates are screened by the directors, executive committee, and staff of the Honors Program, with the assistance of the B.Y.U. Counseling Service.

While most applicants are prospective freshmen, a student, B.Y.U. or transfer, may enter the program at any time prior to the first semester of his junior year.

Scholarships

While the majority of participants in the program hold academic awards of one kind or another, thirteen honors scholarships are available each year to especially well-qualified applicants. These carry a stipend of \$400 and are renewable for four years. To be considered for one of these, a student must file an application to enter the Honors Program along with a general application for scholarship aid.

Registration

Registration for honors students will follow the established University procedure each semester with the following exceptions:

1. Honors students register during the first day of registration.
2. They obtain class cards for honors sections from the director of the program rather than from the departments involved.

Instructors for honors sections are carefully selected, and the size of these sections is kept small enough to allow the teacher to give personal direction to each student.

Advisement

Each student in the Honors Program is assigned to a faculty adviser prior to his first semester's registration. If he has selected a major field, the adviser will be in that or a closely related field; however, it is not necessary to designate a major on entering the program, and changing the major after admission is permissible.

It is the student's responsibility to meet with his adviser prior to or in connection with each registration and as frequently on other occasions as his academic or other needs require. He will also be invited to meet with the director or associate director of the program from time to time during his University career, and he is encouraged to counsel with them when he has a problem in connection with the program.

Course Criteria

The following criteria have been established for honors courses whose primary function is to satisfy the **general education requirements** of the University:

1. General education for nonmajors rather than accelerated coverage for majors or minors.
2. No specialized prerequisites beyond admission to the Honors Program.
3. Admission restricted to students in the Honors Program except that other students with high academic records may be admitted with the written permission of the instructor if space is available.
4. Differentiation from nonhonors courses primarily in organization and method rather than in gross work load required of the student.
5. Grading so that work of comparable quality receives the same grade in honors as in corresponding nonhonors classes.

The following criteria have been established for honors courses whose primary function is to satisfy **departmental requirements**:

1. Accelerated coverage or more extensive coverage for majors, minors, or others with a special interest in the subject.
2. Admission by prerequisites or departmental screening.
3. Grading so that work of comparable quality receives the same grade in honors as in corresponding nonhonors classes.

It being recognized that uniformity of standards is very difficult to obtain in a program involving several dozen departments and teachers, students in honors sections are encouraged to discuss with their teachers what may appear to be deviations from the above criteria and to bring what seem to be particularly serious problems to the attention of the directors.

Additional information regarding honors work at B.Y.U. is available in a brochure which may be obtained by writing to Honors Program, D-243 ASB, Brigham Young University, Provo, Utah.

Prelegal Course

There is no single prescribed prelaw program. A student may major in any one of several fields as basic preparation for law school. The prime requisite of a successful lawyer is a well-disciplined mind. He must be capable of embracing complex situations—identifying subtle distinctions and appraising arguments. He also must be able to weigh opposing considerations and be capable of sustained effort over long periods of time. To produce such a person, the college schedule should include courses intended to expand the mental powers of a student to the utmost and to bring about precision of thought.

The following important advice given by a leading law school may well be noted by prelegal students:

"Few ideas are more fallacious or harmful than the notion that it is possible to dawdle through high school and college and then make the adjustment to higher standards promptly upon entering the professional school. Essential habits of concentration and effective methods of study must be acquired and developed during the prelegal years."

In addition to the courses in general education prescribed by the University, it is suggested that a satisfactory prelegal course might be selected from the following fields: English, political science, history, economics, accounting, psychology, speech, sociology, and mathematics.

Because of the growing tendency of law schools either to recommend or demand that the entering student have a B.A. or B.S. degree, the prelegal student should plan his freshman and sophomore programs so that he may continue working to obtain a bachelor's degree.

Lyceums and Forums

Almost since its founding, Brigham Young University has been bringing to its students distinguished men and women in arts and letters. The lyceums are evening programs of cultural value. Forum assemblies, held each Thursday morning, feature speakers and artists who can offer students a better understanding of our contemporary civilization. During the 1962 and 1963 Summer Sessions and the 1962-63 and 1963-64 regular school years, the following were scheduled for the lyceum or the forum series:

Akatombo Singers of the University of California at Los Angeles, two appearances (Summer)

American String Quartet, ten appearances (summer) Maurice Wilk (deceased),
LaMar Alsop, David Schwartz,
David Soyer, John Dalley

Hanson Baldwin Military Editor for New York "Times"

Arthur L. Beeley Sociologist

Sir Anthony Wedgwood Benn British Critic and Author

Jim Bishop Author, Columnist

Suzanne Bloch, two appearances (summer) Lutenist

Margot Blum, two appearances (summer) Mezzo Soprano

John Mason Brown Editor

Les Brown and his band Jazz Conductor

John Browning Pianist

Dave Brubeck, with ensemble Jazz Impressionist

Dr. Albert Burke Author, Producer

Bennett Cerf Publisher, Author

John Ciardi Poetry Editor for "Saturday Review"

Pierre Cochereau, two appearances (summer) Organist

Concordia Choir Vocal Ensemble

Hans Conreid Actor

Mary Costa Soprano

Phyllis Curtin Soprano

Murray Dickie Tenor, Metropolitan and Vienna State Opera

Roscoe Drummond Journalist

Eleanor Dulles	Economist, Diplomat, Educator
M. Stanton Evans	Author, Editor
Maureen Forrester	Contralto
Thomas M. Franck	Professor of International Law, New York University
John H. Furbay	Lecturer
Carl Fuerstner	Pianist
Sir Geoffrey Furlonge	British Diplomat
Fernando Germani	Organist
Max Gordon	Broadway Producer of Plays
Eldon Griffiths	Editor
Walter Hautzig	Pianist
Brooks Hays	Former Member of Congress
Anton Heiller, two appearances (summer)	Organist
Richard H. Hotellet	News Analyst at U.N.
Francis Jackson	English Organist
Dr. Walter Judd	Authority on U.S. Foreign Policy
Kansas City Philharmonic Orchestra	Hans Schwieger, Conductor; Zvi Zeitlin, Violin Soloist
Julius Katchen	Pianist
Henry A. Kissinger	Government Adviser
Chris Lachona, two appearances (summer)	Tenor
Dr. Arthur Larson	Director, World Rule of Law Center
William Laurence	Science Editor
William J. Lederer	Author
Loewenguth Quartet	String Ensemble
Cornell MacNeil	Metropolitan Opera Baritone
Clifton Matthews, three appearances	Pianist
Dr. Richard B. K. McLanathan	Director, American Art Exhibit at the Moscow Fair
Gerald Moore	Lecturer, Pianist
John J. Niles, two appearances (summer)	Composer, Recitalist
Marni Nixon, two appearances (summer)	Soprano
John Ogdon	Pianist
Leslie Parnas	Cellist
Norman Vincent Peale	Author, Lecturer
Flor Peeters	Organist
Virgilia Peterson	Literary Critic and Author
David Poleri, two appearances (summer)	Tenor
Beta Popper, two appearances (summer)	Soprano
Jan Popper, two appearances (summer)	Lecturer, Pianist
Karl Richter	Organist
Victor Riesel	Journalist
Leighton Rollins	Authority on the Theatre
Carlos P. Romulo, two appearances	President, University of the Philippines
Harrison E. Salisbury	Author, Journalist
Robert Scalapino	Author, Lecturer
George Shearing, with ensemble	Pianist
Walter Slezak	Star of Stage and Screen
Armand N. Spitz	Author, Inventor
Tossy Spivakovsky	Violinist
F. C. Stukenbroeker	Federal Bureau of Investigation
Walter Sullivan	Author, Journalist
Dr. Harold Taylor	Former President, Sarah Lawrence College
Giorgio Tozzi	Metropolitan Opera Bass-Baritone
Andrew Tully	Author, Correspondent
Utah Symphony Orchestra, five appearances	Maurice Abravanel, Conductor
Utah Talent Night	
Leon Volkov	Editor
James J. Wadsworth	American Statesman
T. H. White	British Author
Zabaleta	Harpist

General University Services

Objectives

... seek ye out of the best books words of wisdom:
seek learning even by study, and also by faith.

—Doctrine and Covenants, Sec. 88, v. 118

David O. McKay, President of the Church of Jesus Christ of Latter-day Saints, has stated these as the objectives of a student at Brigham Young University. As a student one should:

1. Become aware of one's own ignorance and gain humility in contemplating how infinite God's creations are.
2. Increase one's knowledge, selecting those facts and truths which will be most valuable and realizing that exact and definite knowledge is always of the greatest possible value and importance to every individual who has the moral courage to use it rightly.
3. Learn that acquisition of knowledge will result only from personal effort, not from superficial study or shirking.
4. Realize the responsibility one has, because of free agency, of individual choice. The opportunity for rising above the plane of animal existence is open to all who will choose it.
5. Come to a knowledge that the purpose of life is not mere existence or pleasure or fame or wealth, but the perfection of humanity through individual achievement under the guidance of God's inspiration.

It has been the aim of the University to encourage students to realize these objectives, objectives closely allied to, and derived from, the basic philosophy of Mormonism: man, the son of God, is a free agent with unlimited possibilities for eternal development under God's guidance; a never-ending search for truth and for an understanding of the truth should be among the activities of those who aspire to perfection.

Objectives Formulated by the Faculty

The objectives which Brigham Young University has set for itself derive from the Latter-day Saints' concept of the nature of man, which places man as the offspring of God and as a free agent with unlimited possibilities for eternal development under leadership of his Heavenly Father. The noblest goals in eternal life may be achieved only when men work together, keeping the doors of opportunity open for everyone, and when they act under a sense of obligation to share with their fellowmen the most inspiring vision of life's possibilities. Therefore, man must use all possible means of coming into possession of truth. As a result of this Latter-day Saint ideal the curriculum of Brigham Young University includes the revealed word of God, the humanities, the arts, the natural sciences, and the social sciences. Man's glory is his intelligence, by which he may discover and apply truth and ultimately master the universe.

The objectives of Brigham Young University, prepared by the faculty and approved by the Board of Trustees in 1959, are as follows:

Education at Brigham Young University is directed toward the development of the whole person, whose life is balanced by many interests and activities, integrated by a knowledge of divine revealed truth, and dedicated to the service of mankind. The University strives to provide an environment conducive to such growth and sets forth the following as its major objectives:

1. To provide an atmosphere congenial to the development of true Christian ideals in which students may develop faith in God, and obtain an understanding of the principles of the Restored Gospel and a desire and reso-

lution to make its standards the guiding light of their lives in service to the Church and their fellowmen.

2. To help students obtain an understanding of the world around us—its natural and physical phenomena, its peoples and their problems, and its heritage of wisdom.
3. To promote scholarly research among faculty and students in order to advance the frontiers of knowledge.
4. To assist students in learning to think clearly and critically and to communicate effectively.
5. To foster an appreciation of literature and the arts and to stimulate participation in creative or expressive activity.
6. To assist students in preparing for professional or occupational responsibilities suitable to their interests, aptitudes and capacities.
7. To provide continuing educational training and services to off-campus individuals and groups.
8. To encourage social understanding and personal development in preparation for the responsibilities of family life, Church service, community leadership, and basic citizenship.

History of the University

Founding and Philosophy. Brigham Young University was established pursuant to a deed of trust executed by Brigham Young, President of the Church of Jesus Christ of Latter-day Saints, on October 16, 1875. That deed expressly set forth that the "pupils shall be instructed in . . . such branches as are usually taught in an academy of learning," and also "in the Old and New Testaments, the Book of Mormon and the Book of Doctrine and Covenants."

A group of seven persons appointed by President Young comprised the first Board of Trustees. They were Abraham O. Smoot, President of Utah Stake of the Church, which embraced all of Utah County, William Bringhurst of Springville, Leonard E. Harrington of American Fork, and Wilson H. Dusenberry, Martha J. Coray, Myron Tanner and Harvey H. Cluff of Provo, all prominent members of Utah Stake.

At a meeting November 22, 1875, the Board of Trustees organized the Academy. At that time the Timpanogos Branch of the University of Deseret had just been discontinued, and it was too late in the year to arrange a complete school year. Consequently the board decided to hold two preliminary terms of Brigham Young Academy. Warren N. Dusenberry, who had been principal of the Timpanogos Branch, was selected to become principal of the Academy. After conducting the first preliminary term, which ended April 15, 1876, he resigned to practice law.

Ten days later, President Brigham Young, acting for the Board of Trustees, requested Dr. Karl G. Maeser, a convert to the Church from Germany, to come to his office. "Brother Maeser," said the President, "I have another mission for you. We have been considering the establishment of a Church school, and are looking around for a man—a man to take charge of it. You are the man, Brother Maeser. We want you to go to Provo to organize and conduct an academy to be established in the name of the Church—a Church school."

A few days later, Dr. Maeser called at the office of President Young and said, "President Young, I am ready to go to Provo. What are my instructions?"

"Only this," replied the President. "I want you to remember that you ought not to teach even the alphabet or the multiplication tables without the spirit of God. That is all. God bless you. Goodbye."

Dr. Maeser accepted this all-embracing charge, believing that the ultimate good in education could be summed up in the words of the Master: "Be ye perfect, even as your Father in Heaven is perfect." In one of his memorable sermons, Dr. Maeser stated the real purpose of the school by saying, "Not by bread alone, neither for bread alone does man live. There are higher objectives yet to be attained, other truths to be learned, and greater work to be done." Years later, consistent with that philosophy, the school adopted as its motto this revelation of the Lord: "The glory of God is intelligence."*

*Doctrine and Covenants 93:36

Administration of Karl G. Maeser. Karl G. Maeser served as principal of the Academy from April 24, 1876, to January 4, 1892, a period of 16 years.

He had received intensive training in the excellent German schools of his time. He was a graduate of the Dresden Gymnasium and of the normal schools of Friedrichstadt, Germany. At the time of his conversion to the Church, he was Vice-Director of the Budich Educational Institute at Dresden.

Neither Warren N. Dusenberry nor Karl G. Maeser had much academic assistance at the beginning of school. When Dr. Maeser began his teaching at Brigham Young Academy, he was principal and the sole teacher of the twenty-nine students, most of them from Utah County.

The old Lewis Building, which stood on the corner of Third West and Center Streets, was the first home of Brigham Young Academy. This building was later described by Justice George Sutherland of the United States Supreme Court, one of the Academy's first students, as being a "structure without beauty or grace or any other aesthetic feature calculated to invite a second look It consisted of one large room and a stage—both so utterly bare and gloomy as to make inappropriate any form of entertainment except tragedy."

By 1882 this building was found to be inadequate for the needs of the school, and additional rooms were built from funds provided by A. O. Smoot, Harvey H. Cluff, Myron Tanner, and W. H. Dusenberry. However, this structure was entirely destroyed by fire January 27, 1884. Temporary quarters were obtained, and the school continued with the loss of only one day of school. During the summer of 1884 arrangements were made with Z.C.M.I. for the use of the upper floor and part of the lower floor of its warehouse on University Avenue.

Members of the Board of Trustees were appointed by Brigham Young until his death in 1877, when the responsibility fell upon his heirs.

The transition of Brigham Young Academy into the University of the Church has been marked by periods of great financial distress. Brigham Young died before he had provided for the endowment of the institution. This left the school without any assured source of income.

In the early days of the school, when no funds for the budget could be found, the board actually considered closing the Academy. It was then that Professor Maeser and his faculty showed their loyalty by teaching for anything they could get, including agricultural products, which were accepted from students in lieu of cash tuition.

President A. O. Smoot of Utah Stake was equally loyal. In the winter of 1887, to bolster up a shrinking enrollment, he asked each member in attendance at a stake priesthood meeting to pay the tuition of at least one student at the Academy. On leaving before the close of the meeting, he told the priesthood assembled that they might name the sum he should pay and he would abide by the decision. Members of the Academy faculty readily responded to the call. One faculty member, who was teaching his first year at a salary of twenty dollars per month, paid a quarter's tuition for one student.

On June 8, 1888, President Wilford Woodruff organized a General Board of Education of the Church, consisting of nine members. This board directed the activities of the school, but the power of appointment of the Board of Trustees still remained with the heirs of Brigham Young until July 18, 1896, when, by the adoption of the Articles of Incorporation for the University, the right of appointment was granted to the First Presidency of the Church through the consent of the heirs of Brigham Young. By this action, the Church assumed the indebtedness of the institution and accepted the responsibility of maintaining Brigham Young University.

On January 4, 1892, the school was moved to what is now known as the Education Building, the first structure built especially for the University. Much of the \$75,000 it cost was made available through the personal credit of President A. O. Smoot, a member of the Board of Trustees at that time.

Dr. Maeser's administration will be remembered primarily because of his masterful teaching. His legacy to the Church school system consisted of three ideals: (1) the acquirement of intelligence by academic studies; (2) the development of character; and (3) a reverence for the revealed word of God, together with a living testimony of the divinity of the message of the Church which he represented. He often stated that "no infidel" would go out from his school, and it is doubtful whether any did. His sermons were classics which lived with

his students throughout their lives. He was the great spiritual architect of the school.

Administration of Benjamin Cluff. Benjamin Cluff, a former student of Karl G. Maeser, served as president from January 4, 1892, to December 23, 1903. He was one of the first native Utahans to earn a college degree, having received it from the University of Michigan in 1890. He influenced many young men and women to go to larger universities in pursuit of higher learning. Some of them later became teachers at Brigham Young University.

His administration was effective in changing the school from one which was still largely a normal school, with a very small college department, to a university.

After 1892 President Cluff asked the Church authorities to provide another building to house the growing student body properly. As the Church was not prepared to furnish the money, Reed Smoot, chairman of the Executive Committee of the Board, took the initiative and secured a contribution of one thousand dollars each from Wilford Woodruff, George Quayle Cannon, Joseph Fielding Smith, Reed Smoot, Jesse Knight, Charles Edwin Loose, Alfred William McCune, Amanda Inez Knight, Stephen L. Chipman, and Jesse William Knight. The cost of the building exceeded ten thousand dollars, but Reed Smoot subscribed the additional amount to cover the expense. It was named College Building. Dedication was held in connection with commencement week in 1898.

The financial panic of 1893 further intensified the school's financial difficulties. Some of the real estate sold to clear part of the indebtedness had to be repossessed by the school, and \$30,000 was supplied by the Church to be applied on its debts. President A. O. Smoot underwrote large notes for the school to keep it operating. On his death, the trustee-in-trust of the Church, in the interest of the heirs of the estate, agreed to underwrite all notes of the Academy bearing President Smoot's endorsement.

President Cluff was instrumental in founding an alumni association in June of 1893. He gave encouragement to student organization and activity. Early in his administration two school papers were begun; athletic sports such as football, basketball, and track were encouraged; and the school colors, blue and white, were chosen. He established the first summer school and added new departments and laboratories.

In 1894 the title of the head of Brigham Young Academy was changed from "Principal" to "President," and in 1903 the school became Brigham Young University.

In 1900 President Cluff sponsored a South American expedition to engage in archaeological study of Book of Mormon sites. While he was in South America, Acting President George H. Brimhall asked the authorities for a Church normal training school building with a gymnasium on the upper floor. Jesse Knight, a member of the Board of Trustees, volunteered a contribution of \$15,000. The board promptly authorized the project. Other contributions were solicited with good results. The total cost of the Training School and Gymnasium Building was \$35,000. The dedicatory service was held February 17, 1902.

Administration of George H. Brimhall. On April 16, 1904, after having acted as President of the University while Benjamin Cluff was in South America, George H. Brimhall was appointed President of Brigham Young University. Joseph B. Keeler was appointed as his first counselor and Edwin S. Hinckley his second counselor.

Dr. Brimhall was also a former student of Dr. Karl G. Maeser. He was a dynamic speaker and also a great molder of character. He continually stressed the fact that the primary purpose of the school was to make better Latter-day Saints.

The Missionary and Preparatory Building, later known as the Art Building and now as B.Y. High, was dedicated October 26, 1904. It cost \$13,000, of which amount \$9,000 was apportioned to four stakes: Utah, Alpine, Nebo, and Wasatch.

In 1904 the students and faculty began negotiations for the purchase of seventeen acres of land known generally as Temple Hill. This land, purchased from Provo City about 1907 at a total cost of \$1,000, was the beginning of the upper campus. A survey of the land purchased showed that about one and one-half acres at the point of the hill was not included in the deed given by

Provo City. The students and faculty members of the school voluntarily raised an additional \$1,000 to pay for this land.

This purchase provided a place for the Maeser Memorial Building, the cornerstone of which was laid on Founder's Day, 1909. It was ready for occupancy the fall term of 1911. The structure and furnishings cost \$130,000; the Knight family contributed \$65,000, and other members of the alumni some \$50,000. The remainder of the cost was met through the sale of Blue Bench Irrigation Company Bonds owned by the school.

The Women's Gymnasium was erected in 1913 and the Mechanic Arts Building in 1919.

On December 21, 1914, the late Jesse Knight made an endowment to the University of one hundred thousand dollars in six per cent bonds. The interest payments on these bonds, together with the payments on bonds which have matured, have been placed at interest, and the cash credit of this account now represents approximately twice the amount of the original endowment.

During President Brimhall's administration, graduate work was introduced and the first master's degrees were conferred. The school spirit was furthered by the organization of the students into a student body. Printing of the school yearbook, **The Banyan**, was begun, and a huge white "Y" was placed on the mountainside east of Provo.

Dr. Brimhall served until July 1, 1921, a period of 17 years.

Administration of Franklin S. Harris. Franklin S. Harris, a former student of the institution under President George H. Brimhall, was selected to succeed his former president. Dr. Harris had received his Ph.D. degree from Cornell University in 1911 and had served as an instructor in the Juarez Academy and Cornell University, professor of agronomy for the Utah Experiment Station, director of the School of Agricultural Engineering and Mechanical Arts, and director of the Utah Experiment Station at the Utah State Agricultural College. He had a world-wide reputation as a scientist.

Dr. Harris became president July 1, 1921, and served until June 30, 1945, a period of 24 years, the longest term of any president. During his administration, academic gains of great significance were made. The University was organized into five colleges: Applied Sciences, Arts and Sciences, Commerce, Education, and Fine Arts; and the Division of Religion and the Extension Division were established. The graduate school was formally organized and a dean of the Graduate School appointed. The Heber J. Grant Library was completed in 1925, the Y Stadium in 1929, and during the last ten years of his administration a building program was begun which has been accelerating ever since.

It was President Harris who first envisioned the present expanded upper campus of the University and indeed who made it possible by his extensive purchasing of lands surrounding the original upper campus. It was also during his administration that all members of the Quorum of the Twelve became members of the Board of Trustees.

In 1935 two stories were added to the Mechanic Arts Building to provide additional classrooms and laboratories. The name was changed to George H. Brimhall Building. During 1935-36, a Stadium House on the west side of the football field was erected. In 1937-38, Allen Hall, a men's dormitory, and in 1938-39, Amanda Knight Hall, a women's dormitory, were constructed. These buildings accommodate 90 and 130 students, respectively. The construction of both buildings was financed by borrowing from the Knight Endowment Fund. The Joseph Smith Building was begun in 1939 and completed in 1941 as a project of the Church Welfare program. During 1943 the University acquired the National Youth Administration Building on the east part of the campus for use of the Mechanic Arts Department. In 1944, because of the acute housing problem created by the building of the Geneva Steel Plant, it was equipped to serve as a temporary dormitory for women.

Administration of Howard S. McDonald. Howard S. McDonald, the next president of the University, served from July 1, 1945, to October 30, 1949. Before being appointed to this position he had served as assistant superintendent of schools in San Francisco and later as superintendent of Salt Lake City schools.

Under his leadership the school experienced a major expansion. From 1946 to 1948 the temporary women's dormitory at the southeast end of the campus

was remodeled into what is now known as Social Hall, containing a large dance floor and classrooms and offices used by the Music Department. During the same period Knight-Mangum Hall, a four-level structure adjoining the Social Hall on the west, was constructed. This building provides housing and eating accommodations for 280 women. Because of the enlarged postwar student body, student housing facilities were greatly increased. In cooperation with the Federal Works program, temporary housing, known as Wymount Village, was constructed in 1946-47 near the eastern edge of the campus for 200 married veterans and their wives and for 350 single veterans. Also under the Federal Works program of aid to education, temporary-type buildings were provided in 1946-47, consisting of the Physical Plant Building, Public Relations Building, North Building, Industrial Arts Building, Wymount Dining Hall, and University Press. In 1948 the Speech Department was moved to the Upper Campus and housed in temporary buildings. Here the Brigham Young University broadcasting station, KBYU, was located. A central heating plant costing \$200,000 was constructed in 1946.

Under President McDonald's direction the Eyring Science Center was begun and almost completed. Called by many educators the finest and most modern science building between the Mississippi and the Pacific Coast, it has four stories and contains approximately 150,000 square feet of floor space (practically the equivalent of the space of all of the other buildings of the University previously constructed). It is equipped with the finest facilities for study and research. Moreover, it is proof of the Church's sincere belief that there is nothing inconsistent between scientific truth and the teachings of the Gospel.

During his administration the planning and architectural drawings of buildings for the University were assigned to a University architect. The buildings and grounds were placed under the direction of a superintendent of buildings and grounds.

In the postwar era of expanding collegiate enrollments, Brigham Young University, under his direction, expanded at a much faster rate than many other universities of the country. The faculty was increased to meet the new need. The Graduate School and the Student Counseling Service were both reorganized. As was true with his predecessors, he upheld and perpetuated the spiritual ideals of the University's academic life.

Administration of Christen Jensen. Dr. Christen Jensen acted as President of Brigham Young University during 1939-40 (when Dr. Harris spent a year in Iran) and again from November 1, 1949, until the early part of 1951. His two periods of administration were characterized by an emphasis on scholarship and a meticulous observance of proper University standards. In an era of dynamic University problems, President Jensen directed an administration characterized by academic and administrative stability and sound judgment. Under his direction the Eyring Science Center was completed and dedicated on October 23, 1950; the plans for the new George Albert Smith Fieldhouse were approved, a drive for funds conducted, and its construction practically completed at a cost of over \$1,000,000. It provides, in addition to athletic and physical education facilities, offices for faculty members in the College of Physical Education. The fieldhouse has a capacity of 10,650 persons.

Administration of Ernest L. Wilkinson. In 1950 Dr. Wilkinson was selected by the Board of Trustees as the new President. He began his period of service in February 1951.

After graduating from Brigham Young University, he was graduated from George Washington University Law School where he received his LL.B. degree. He then attended Harvard Law School where he obtained the degree of Doctor of Juridical Science. After graduation he accepted an appointment to teach at the New Jersey Law School as professor of law. Soon thereafter he was invited to become an associate in the New York City law firm of which the Hon. Charles Evans Hughes, later Chief Justice of the Supreme Court of the United States, was the senior member. Later, organizing his own firm in Washington, D.C., Dr. Wilkinson achieved a national reputation as a lawyer, climaxed by obtaining judgments of \$32,000,000 for the Ute Indians, the largest judgments ever entered in the United States Court of Claims against the United States.

As a churchman he has served as a bishop in the New York Stake and as a member of the stake presidency in the Washington Stake, and he has represented the Church on the National Commission for Army and Navy Chaplains, which approves chaplains appointed to the armed forces of the United States.

In 1951 a Reserve Officer Training Corps unit of the Air Force was activated at Brigham Young University. The officers of this unit have been selected by the Secretary of the Air Force, with the approval of the President of the University. This unit is composed entirely of students regularly enrolled at Brigham Young University, and the same standards of conduct and living are required of them as of other students at the University. In accordance with an agreement with the federal government, a building was completed in October 1952, which serves as a permanent rifle range for the A.F.R.O.T.C.

During his thirteen years of service, the University experienced well over a 100 per cent increase in enrollment. In 1953 the University became the largest church-related institution of higher education in the United States. The faculty witnessed an even larger proportional increase in numbers, and the five colleges, one school, and two divisions previously comprising the University were increased to eleven colleges, one school and one division: Colleges of Biological and Agricultural Sciences, Business, Education, Family Living, Fine Arts and Communications, General, Humanities and Social Sciences, Nursing, Physical and Engineering Sciences, Physical Education, Religious Instruction; Graduate School; and Adult Education and Extension Services.

Throughout his administration President Wilkinson insisted upon ever-higher standards of scholarship. Under his direction the curriculum underwent extensive revision to eliminate subuniversity or duplicating courses, to strengthen existing courses, and to add courses needed in the expanding college program.

A notable advancement in the academic program of the University resulted from the action of the Board of Trustees in authorizing programs leading to the Ph.D. and Ed.D. degrees. Between November 22, 1957, when the first doctoral degrees were authorized, and the present date approval has been given to fourteen departments for programs leading to the Ph.D. degree in twenty-six fields of study. Two departments offer work leading to the Ed.D. degree.

Among his most significant achievements was the organization on January 8, 1956, of a Brigham Young University stake of the Church. That stake has been divided into several stakes, and the original twelve wards have been increased to about four times that number of wards. Spiritual benefits of this program to students have been incalculable. One specific advantage is the providing of a spiritual adviser to every 300 or 400 students supplementing the regular University Counseling Service and offering a dual system of advising and counseling.

During the administration of President Wilkinson, the following new buildings and facilities were added to the University:

The Herald R. Clark Student Service Center, begun in July 1952, was completed and made available for occupancy in March 1953. The financing of this building was primarily from income of the Students' Supply Center over its years of operations. In the building is housed the division of Adult Education and Extension Services.

A large building project was started July 1952 with the construction of 16 buildings making up what is known as Heritage Halls. These buildings, completely modern in every respect, house 972 girls. Six girls live together in an apartment, preparing their own meals and doing their own housework. There are ten apartments to a building. Occupancy of the first of the buildings was begun in March 1953. The entire project was completed and fully occupied by the fall quarter of 1953.

Eight new buildings to house women students were added to the original 16 buildings of the Heritage Halls group. The total project was completed in the summer of 1956 and was fully occupied for the fall quarter of that year. The addition of these eight structures brings the total accommodations for this type of housing for women to 1,548.

The Harvey Fletcher Engineering Laboratory Building, constructed in 1953 and added to in 1954 and 1955, is an H-shaped building having four wings with laboratory space for the Civil, Mechanical, Electrical, and Chemical Engineering Departments. The central core of the building consists of offices serving the needs

of the teaching staff. In 1953 a temporary motion picture building with sound stage and related facilities was constructed. This building was equipped with modern animation and motion picture sound equipment for production of educational moving pictures.

The David O. McKay Building, a classroom building containing 104 offices and 31 classrooms and laboratories, was begun in March 1954 and completed in December of that same year. This building currently houses the College of Education, and the Departments of English, Languages, and Political Science. In the early spring of 1955 the Benjamin Cluff Plant Science Laboratory, with two connecting greenhouses, was completed. This structure is used by the Botany, Agronomy, and Horticulture Departments. The Howard S. McDonald Student Health Center was opened for use of all students enrolled at the University in the fall of 1955.

Construction of the Joseph F. Smith Family Living Center began in the fall of 1955 and was completed in December 1956. Housed in this structure are the College of Family Living, the College of Nursing, a nursery school, and the Departments of Psychology and Sociology. New housing facilities for married couples were added to the University housing projects in 1957. Wyview Village, a project consisting of 150 two- and three-bedroom homes for married students, was completed and fully occupied in the fall of 1957. Another project during 1957 was the conversion of the University heating system to a \$2,000,000 high-temperature water system.

In the fall of 1958 five residence halls, known as Helaman Halls, were completed. This project consists of residence structures housing 1,170 and one central building with dining, recreation, and business office facilities. Two additional residence halls became part of this project in the fall of 1959, bringing the total number of accommodations up to 1,638.

A permanent building for the production of motion pictures was completed in the fall of 1958. It is located in the river bottom area a short distance from the main campus. In December of 1959 the William H. Snell Industrial Education Building, containing 60 rooms for offices, classrooms, and laboratories for the Industrial Education Department, was completed. At this same time an addition to the west end of the George Albert Smith Fieldhouse was readied for use.

During the summer of 1960, the Jesse Knight Building, which houses the departments of the College of Business, was completed.

An underpass located near the "Y" Bell Tower was built in 1961 to accommodate the pedestrian traffic between upper campus and the Fieldhouse.

The four-level, X-shaped Abraham O. Smoot Administration and General Services Building was completed in the summer of 1961. Also completed in the summer of 1961 was the 1,000,000-volume J. Reuben Clark, Jr., Library Building which has five levels, two of them below ground.

The Alumni House, located at the brow of the hill near the main entrance to the campus, was completed in the fall of 1961. During this same period ground was broken for the Wymount Terrace housing project, which was completed in March of 1963. This project consists of three laundry buildings, an administrative office building, and 462 apartments currently housing 198 families, 1,006 single girls, and fourteen head residents.

The "Y" Center, begun in the summer of 1961 and completed in April 1964, houses all student offices and provides facilities for the majority of student activities. The Franklin S. Harris Fine Arts Center contract was awarded in June of 1962, and the building was completed in July 1964. This building houses all fine arts and communications functions and offices.

The new Physical Plant Building, completed in September 1962, houses all the shops which deal with the maintenance and upkeep of the campus, custodial services, and the motor pool. Modifications and an addition to the central heating plant were undertaken in 1963 to handle the expanded building program on the campus.

An addition to the fieldhouse ticket office was completed in the fall of 1963. Now under construction are the Stephen L. Richards Physical Education Building and another addition to the fieldhouse. The completion of the physical education building will provide facilities for swimming instruction, along with many other features. A new stadium is to be completed for the 1964 football season.

Five new seven-level residence halls, begun in July of 1963, are due for completion in December 1964, along with a central building containing dining, recreation, and business office facilities. A dairy products laboratory is in the planning stages. Campus roads and walks have been expanded and improved and as of 1963 blacktopped parking areas accommodated 5,777 cars.

The University Today

Unification Plan. In every era of the Church its leadership has been sensitive to the need of continued intellectual and spiritual growth for its members. To meet this need, Church educational policies have constantly been adapted or modified to serve more fully the youth of the Church.

It was in such a spirit that all Church educational institutions were combined in July 1953 under one administrator, Ernest L. Wilkinson, who in turn was subject to a board of trustees for Brigham Young University and a board of education for the rest of the Church School System. Both boards, however, consist of the First Presidency and the Council of the Twelve. In announcing this unified plan the First Presidency said: "This great system of schools, institutes, and seminaries can become an ever more effective instrumentality in equipping the youth of the Church with solid foundations to meet the challenge of modern living." It added that Dr. Wilkinson had "surrounded himself with strong men to do a big job," and that he would "have at his service the strength not only of these men, but of all the members of the Brigham Young University faculty."

Since the approval of this plan during the summer of 1953 the administrative offices of Church education have been established at Brigham Young University. Thus this University has become the mother institution for Latter-day Saint education. From this campus a spirit of simplifying efficiency, economy, uniformity of standards and procedures, and even wider cooperation and harmony weld all phases of Church educational work into a stronger unit than ever before.

The acting chancellor of the Unified Church School System, Harvey L. Taylor, has available the resources and administrative personnel of B.Y.U., as well as the assistance of the administrator of institutes and seminaries and his staff.

Under this plan established schools, seminaries, institutes, and colleges continue their functions. Changes are brought about as need and the growth of the Church dictate. In addition, each institution shares its particular problems and philosophies with its sister institutions, as coordinated and interpreted by the chancellor and his assistants.

A survey made during a recent semester provided the following information about the faculty:

- 30 were serving on general boards of the Church.
- 2 were temple workers.
- 4 were stake presidents.
- 13 were serving in stake presidencies.
- 2 were stake patriarchs.
- 3 were serving as mission presidents.
- 1 was serving in a mission presidency.
- 48 were on stake high councils.
- 84 were serving in other stake positions.
- 50 were ward bishops.
- 28 were in ward bishoprics.
- 393 were serving in other ward positions.
- 35 were serving in elders' and seventies' quorum presidencies.

Academic Growth and Recognition. Brigham Young Academy as originally organized by Karl G. Maeser had three departments: the Academic, the Intermediate, and the Primary. Instruction was given mostly in the work of the lower grades, although a normal class was included in the Academic Department. Today the University offers a full university curriculum, and its credits are recognized and accepted to the same extent as those of other leading American colleges.

Brigham Young University is affiliated with the following educational associations:

- American Association for Adult Education
- American Association of Colleges for Teacher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Association of University Women
- American College Public Relations Association
- American Council on Education
- American Home Economics Association
- American Library Association
- The American School of Oriental Research
- American Society for Engineering Education
- Association of American Colleges
- Department of Baccalaureate and Higher Degree of the National League for Nursing
- Educational Films Library Association
- National Association of Schools of Music
- National Association of Student Personnel Administrators
- National Commission of Accrediting
- National Council of Family Relations
- National University Extension Association
- Utah Conference on Higher Education
- Western Council for Higher Education in Nursing
- Western Interstate Commission on Higher Education
- Western Personnel Institute

In addition, Brigham Young University is fully accredited by the following organizations:

- Northwest Association of Secondary and Higher Schools
- American Chemical Society
- Engineering Council for Professional Development
- National Association of Schools of Music
- National Council for Accreditation of Teacher Education for the preparation of elementary teachers, secondary teachers, and school service personnel, with the master's degree as the highest degree approved.
- National League for Nursing
- Utah State Department of Public Instruction in cooperation with the United States Office of Education for the training of vocational home economics teachers.

Growth of the Student Body. When founded in 1875, Brigham Young Academy gave elementary and high school work only. Over the eighty-nine years of its existence it has become in terms of full-time equivalent students the largest university in Utah. At the present time it is experiencing a rapid growth, which, if continued, will soon make it one of the largest institutions of the West.

At the time of its organization in 1875 nearly all of the students came from Utah County and its environs. Its student enrollment began at 29. During the regular 1962-63 school year, there were on campus approximately 14,157 daytime students. This number combined with the enrollments of the Summer School, Evening School, and Laboratory Schools brought the total to 18,291 students. In addition, from September 1962 to August 1963 there were 45,321 enrollments in Adult Education and Extension Services.

The students registered during the last few years came from all the states of the Union, the District of Columbia, the Panama Canal Zone, and 54 foreign areas. Approximately 62 percent of the students are from outside the state of Utah, and this percentage is increasing each year. As in the days of Dr. Maeser, industry and thrift are encouraged. At the present time over 40 percent of all students are employed in earning part of their subsistence.

Membership in the Church of Jesus Christ of Latter-day Saints is not required for admission, although at the present time 93 percent of the students are members of the Church. The other 7 percent, as a condition of their continuance as members of the student body, are required to abide by the same standards of morality and integrity as other students.

University Library

The J. Reuben Clark, Jr., Library contains the library collection, which includes approximately 500,000 bound volumes, several thousand pamphlets, and an extensive collection of titles on microfilm and microcards. A good selection of professional journals and other current periodicals as well as local, regional, and national newspapers is also available.

The library is a depository for United States and Canadian government documents and regularly receives publications of state and local governments. The general library facilities are available to students, faculty, alumni, and other interested persons. Regularly enrolled students present their activity cards to borrow books. Others may obtain a permit from the circulation librarian. The library is open during the college year from 7:30 a.m. to 10:00 p.m. Monday through Thursday, from 7:30 a.m. to 9:00 p.m. Fridays, and from 8:00 a.m. to 8:00 p.m. Saturdays. Vacation hours, when school is not in session, are 8:00 a.m. to 5:00 p.m. Monday through Friday; it is closed weekends and holidays.

The general collection is available on open shelves on four of the five levels—two below and two above the ground floor. The central reference collection, the public catalog, the circulation desk, and administrative offices are located on the ground level. An informational booklet is available to assist in the use of these facilities. Study space is available on each floor interspersed with stack areas.

The special collections of the library, located on the fourth level, often come to the library from individuals whose interests lead them to devote many years to their acquisition. The books and other material housed in this area are not available for general circulation. Material within each collection is usually confined to a specific subject area.

The facilities of other libraries operated by the L.D.S. Church are available also to students of Brigham Young University. The Genealogical Society Library in Salt Lake City contains approximately 66,500 books and 330,000 rolls of microfilm. These include family histories, genealogy, biography and autobiography, military records, cemetery inscriptions, town, county, and state histories of the United States, and both local and national histories of other nations.

Facilities of the library of the Church Historian's Office are available by arrangement to advanced students for research. It is located in Room 103 of the L.D.S. Church Office Building, 47 East South Temple in Salt Lake City, and is open from 8:30 a.m. to 5:00 p.m. Monday through Friday. Its collections contain publications of the Church, periodicals of the various auxiliary organizations, reports and histories of the various missions, general history of the Church, biographies of Church leaders, and other pertinent published and archival material.

Science Collections

The archaeological collection consists of materials for study and research in the early history of man. Original antiquities on display, illustrating the early history of man in the Old World, range from crude stone hand axes of the Old Stone Age to inscribed tablets and other advanced products of the ancient biblical civilizations of the Near East. Those illustrating the early history of man in the New World include representative artifacts of the early Indian cultures of Utah and the Southwest and antiquities of the ancient pre-Columbian civilization of Mexico and Central and South America. Supplementing this exhibit are replicas of such famous archaeological monuments as the Rosetta Stone—key to the deciphering of the Egyptian hieroglyphics—and the "Tablet of the Cross" from the ancient Mayan city of Palenque in Central America.

Also in the archaeological museum is a research archive of photographs and field card records of antiquities excavated or examined by archaeological expeditions of the University and other institutions.

The botanical collection includes an herbarium of fungi, liverworts, mosses, and vascular plants from many parts of the world. The mycological collection consists of more than 6,000 specimens of fleshy and parasitic fungi, most of

which have been collected in the Rocky Mountain area. This represents the largest collection of its kind in the region.

The vascular plant herbarium includes over 200 plant families, 1,250 genera, and 5,000 species, represented by over 36,000 herbarium sheets. The collection is made up principally of plants collected in the western states, but many plants of the eastern states, Europe, Mexico, and South America are included as well as a good representation of the Arctic regions of Siberia, Iceland, and the Aleutian Islands. Some 2,000 specimens recently have been added to the collection from the Mediterranean region of Europe and from the Middle Eastern countries of Iran and Afghanistan. Separate collections of poisonous plants, range plants, woody plants, and plant diseases are maintained.

The department maintains a botanical garden or arboretum where many trees and shrubs of various regions of North America are grown in natural association. This garden is designed as an experimental project to enrich the tree flora available for use as shade trees, as a public educational exhibit, and as a study for many classes. Several gardens also are maintained for experimental plantings.

The geological collections of the University consist of an unusually complete series of minerals and an interesting variety of fossils.

The minerals number many thousands and are representative of the great western mining districts together with hundreds of localities of note. Part of this collection once represented the nucleus of the famous Deseret Museum Collection of Salt Lake City.

The fossil series are representative of many states and typical world localities. Much of this material also was formerly a part of the Deseret Museum Collection.

A museum displaying several unusual fossil dinosaurs and other reptiles and mammals is at present being developed by the geology department curator.

The zoological collections of the University consist of a large series of vertebrate and invertebrate species from western North America and from many foreign countries. These materials are available to teachers, advanced students, and visiting scientists.

The vertebrate collections consist of sizeable series of fishes, amphibians, reptiles, birds, and mammals housed in the Heber J. Grant Building. In addition to the representative series of local species, the vertebrate collections include the Chester Van Buren collection of South and Central American birds; the Robert G. Bee, John Hutchings, Merlin L. Killpack, and Ashby D. Boyle collections of bird eggs; and the David Starr Jordan specimens of Hawaiian fishes. Staff members, graduate students, and friends of the University have contributed material from Mexico, South America, Africa, Formosa, Malaya, and the South Pacific Islands, as well as from other areas throughout the world.

The invertebrate collections include numerous specimens of insects and their near relatives as well as many representatives of the other phyla of invertebrates obtained locally and from many distant places. Medically important arthropods such as fleas, lice, mites and ticks are represented. Special collections include the Lee F. Braithwaite Collection of marine invertebrates; Lynn and Kate Irene Meibos Collection of mollusk shells; Tom Spaulding and Ashby D. Boyle butterfly collections; and the Charles W. Leng, Charles Schaeffer and Willis Blatchley collections of beetles. The extensive collections of insects are housed in the Brimhall Building. Other invertebrates are suitably preserved and available for research and academic purposes.

Research grants from the Atomic Energy Commission, National Science Foundation, National Institutes of Health, and the Texas Gulf Sulphur Company (Potash Division) have made it possible to add materially to both vertebrate and invertebrate collections from Southern Nevada, the Colorado River Basin, and other areas of the Intermountain West.

Computer Research Center

A solid foundation of research and education in modern computers is essential for significant progress in all fields of knowledge. With the installation of the IBM 650 computer in 1958 the Computer Research Center was established. In

December 1963 a large-scale IBM 7040 computer was installed. An IBM 1401 computer, to be installed in August 1964, will assist in the card handling and printing for the IBM 7040. Supporting punched-card equipment is available in the center.

The primary objectives of the center are to encourage research and to provide instruction in computer science and technology. Research is enhanced by using the powerful arithmetic and logical processing capabilities of the computer. It can not only perform numerical calculations, but can also process symbolic representations of data from all fields. In addition to using the computer as a tool to process data from other fields, research is encouraged on new computer programming and application techniques. Instruction is given in several departments covering computer fundamentals and advanced applications, and frequent noncredit seminars are given on various computer-related topics.

The center, with several full-time staff members and a number of research assistants, serves the entire campus. Each year a few openings exist for student assistantships. Competition is keen, and students should not plan to obtain an appointment until they have discussed their qualifications with the director of operations. Additional information, including a users' manual, may be obtained at the center located in the basement of the Abraham O. Smoot Administration and General Services Building.

Placement Center

The Placement Center assists graduating students and alumni in finding desirable positions in their fields in business, industry, government, and education. This office works in close cooperation with deans and department chairmen.

The placement service includes a placement library where interested students may find books, articles, magazines, and brochures that will acquaint them with companies in which they may be interested and also books and pamphlets which will give advice on such matters as how to conduct oneself in an interview, how to write effective letters of application, and how to prepare a résumé.

All students are urged to register with the Placement Center early in the school year in which they will graduate. Early registration will enable that office to give the most effective possible assistance in finding employment for each graduate.

Faculty Organizations

B.Y.U. Women. All women who are full-time employees of Brigham Young University and wives of full-time employees are eligible for membership in B.Y.U. Women. Strong in tradition and prestige, B.Y.U. Women has been promoting University ideals and providing intellectual and social opportunities for its members since 1916. The program includes afternoon cultural programs, partner-and-guest events, projects, and opportunities to support the University and become better acquainted with the B.Y.U. faculty.

The Society of the Sigma Xi. The Society of the Sigma Xi is a national organization devoted to the encouragement of research in pure and applied science. The local unit is known as the Brigham Young University Chapter. Members of the Society of the Sigma Xi on the staff at Brigham Young University organized a Sigma Xi club in 1935. Since that time it has remained continuously intact, encouraging research and other activities in the various branches of science. A petition for chapter standing was submitted by the local club in 1949. A chapter was granted by the National Society of the Sigma Xi, and formal installation took place October 17, 1950.

Specific local projects include the sponsoring of a national Sigma Xi-appointed lecturer, the promotion of several lectures by prominent scientists within the unit and from nearby institutions, an annual Sigma Xi lecture by a member of the chapter, the awarding of an annual medal to an outstanding student for the completion of a research project, and the direction of possible sources of research funds in the interest of pure and applied science.

Alumni Association

The Brigham Young University Alumni Association was organized in 1893 to "promote the general welfare of Brigham Young University."

During the more than seventy years of its existence it has assisted the University in many ways. The Maeser Memorial Building was built with funds from alumni; part of the property on which the upper campus now stands was obtained by the Alumni Association and turned over to the University, and eighty additional acres were purchased by the Church at the suggestion of alumni leaders; a permanent endowment fund was established in 1929; the Alumni Association is now taking an active part in the Brigham Young University Development Program; the fieldhouse fund drive was supported by the Alumni Association; funds in cash have been turned over to the University at various times for unrestricted use; the Alumni Association played an important role in the raising of funds for the new football stadium; and the alumni have played a vital part in stimulating interest in Brigham Young University through contacts with prospective students.

Alumni of the University are located in all fifty states, four United States territories and possessions, and fifty-two foreign countries. Stake and mission presidents of the Church appoint alumni in their respective stakes and missions to serve as B.Y.U. coordinators who organize and conduct alumni activities in their areas. Business matters of the association are handled by an eighteen-member board of directors, headed by a president, two vice-presidents, a treasurer, the president of the Emeritus Club (composed of alumni who were at the University fifty or more years ago), and a full-time executive director. Members of the board of directors are selected each year to serve terms of three years.

The Alumni Association maintains an Alumni Family Camp at Aspen Grove, located in the North Fork of Provo Canyon approximately eighteen miles from Provo. Constructed in 1963, this mountain retreat invites alumni to return to the area with their families to participate in a program of recreation and education. Included in the facilities are fifty individual cabins, swimming pool, lodge, tennis courts, softball field, dining hall, modern kitchen, children's playground, and other recreational and camping accommodations. The camp is operated on a nonprofit basis and is open during June, July, and August of each year for the benefit of members of the Alumni Association and their families.

Anyone who has attended the University for one quarter or more is a member of the Alumni Association. There are no annual dues or membership drives, except that the Alumni Association solicits contributions for the Brigham Young University Alumni Annual Giving Fund. All contributions to this fund are tax-deductible and entitle the donor to receive publications of the University and the Alumni Association, including the *Alumnus Magazine*, which is issued bi-monthly except during the summer.

Homecoming, in the fall, and Alumni Day, during Commencement Week, are the two major events of the year on campus for alumni. Periodic reunions of all graduating classes are held on these two days. Meeting also are held throughout the country by alumni living in local areas.

The Alumni Association maintains permanent records of all former students of the University and a full-time office staff on the campus. If the current address or other information is needed about a former student, correspondence should be addressed to the B.Y.U. Alumni Association, B.Y.U. Alumni House, Provo, Utah. Alumni visiting the campus are invited to visit the alumni offices in the new Alumni House and to make the building their headquarters while in the area. This building, completed in the fall of 1961, is the "home on campus" for B.Y.U. alumni and their families.

The Alumni Association is a member of the American Alumni Council, an organization composed of alumni associations of all the major universities and colleges in the United States, Canada, and Mexico.

Security and Traffic

The Security Office, a protective agency established for the benefit of students, faculty, and staff, maintains effective liaison with the local police

department and is entrusted with the proper enforcement of campus rules and regulations. All matters concerning security or requiring police action should be referred to this office.

Another major responsibility of the Security Office is the control of campus motor vehicle traffic and parking. In each academic year University staff members and students who regularly or occasionally operate motor vehicles in Provo City shall register any such motor vehicles with the University Traffic Department. In the case of students this is a registration for identification only, not a parking permit. All staff members and students who plan to park on University parking lots between 7 a.m. and 5 p.m. on school days must display a parking permit on their motor vehicles. The student parking fee is \$7.00 per academic year.

The Security Office also offers many other services to students and staff members, including the taking of fingerprints necessary for teaching certificates, government jobs, and A.F.R.O.T.C. and an ambulance service in connection with the Student Health Center. All campus roads will be closed on Christmas Day each year to preserve the private ownership thereof.

Automobile Registration: Out-of-State Students

Out-of-state students may register their car either in their home state or in Utah. If fees and taxes are paid in the home state, students will be exempt from payment in Utah.

Students from out-of-state must register their cars on the campus. If the cars have been properly inspected, the students can get nonresident stickers from B.Y.U. for \$.50 and will not be required to purchase Utah license plates.

Every student who is a resident of Utah, and every nonresident student who is in Utah for more than sixty days, is required to have a Utah operator's license before he may legally operate a motor vehicle on Utah highways.



Abraham O. Smoot Administration and General Services Building

Auxiliary Services

The University has a number of business units which operate as part of the services provided for students and faculty. As a matter of general policy these business units operate on a self-sustaining basis. They include functions such as housing, feeding, printing, motion picture production, purchasing, warehousing, receiving, mail service, creamery products, laundering, bookstore, and farm management.

Student Housing

The business and financial aspects of student housing, on campus and in the Provo community, are supervised from the Office of Student Housing. For details concerning these services, including housing rates, refer to the section of this catalog titled "Student Housing."

Food Services

Regular meal service is provided for students at six different cafeterias on campus. Five of these are operated as part of the board-and-room service of residence halls. It is possible for students living off campus to buy meal tickets at reduced prices and eat in four of these places. The sixth cafeteria is in the "Y" Center, where meals are served at reasonable prices either for cash or by reduced rate scrip books. In addition, by contacting the Office of Student Housing, board-and-room students may participate in a supplemental food program costing approximately \$80 a year more than the regular board-and-room rates.

The University operates four snack bars: one in the "Y" Center, a second in the George Albert Smith Fieldhouse, a third in the Helaman Halls Cannon Center, and a fourth in the new residence halls. Food is available through the day. Food also may be secured from vending machines located throughout the campus. Costs of meals and food service are kept as low as possible, consistent with sound operating management.

The University also operates a dairy products laboratory where milk, ice cream, and other dairy products may be purchased by students and faculty at very favorable prices. Students preparing their own meals find this service both desirable and economical.

Photo Studio

Located in the "Y" Center is a modern, fully-equipped portrait and commercial photo studio, established to provide economical photographic service to students, faculty, and administrative departments. The best in modern production equipment is utilized to make possible high quality work. The studio has served the campus for nearly thirty years. Any student or faculty member may use the services offered by this department.

Post Office

The Postage and Mailing Department is located in the "Y" Center. Its function is to pick up and deliver all of the inter-campus mail and to pick up and meter all of the outgoing U.S. mail. With certain exceptions, two deliveries and three pick-ups are made each day on the campus.

Directory service is available for all mail addressed to Brigham Young University that does not indicate the department for which it is intended. This is true also for mail sent to students c/o Brigham Young University. Whenever possible, mail should show a definite address for students and should be addressed to a specific room and building for faculty and staff to avoid special handling and delay. Mail then will be delivered directly to the proper address or building by the U.S. postal carrier.

A U.S. Post Office, University Station, is located in the "Y" Center, where students can pick up and send mail. Individual rental boxes are available for student use.

Purchasing Department

The Purchasing Department is located in Room C-144 of the Abraham O. Smoot Administration and General Services Building. Its services are designed to relieve faculty, other members of the University staff, and the associated students from certain duties of procurement. Through this department all purchase orders are issued for equipment, supplies, and services for the University, with the exception of library books, which are ordered by the library on special purchase orders.

Stores and Receiving

The Stores and Receiving Department is located in the metal quonset hut directly east of the Harvey Fletcher Engineering Laboratory Building. All deliveries are made here, and materials received are inspected (with the exception of drugs, chemicals, zoological specimens, and delicate scientific instruments, which go directly to the department using them) before being delivered to the various ordering departments.

B.Y.U. Bookstore

The B.Y.U. Bookstore is centrally located in the new "Y" Center in spacious quarters where students can purchase their books, school supplies, gifts, and accessories conveniently and quickly.

The bookstore, a department of the University with policies established by the University, is the official outlet for books and supplies used on the campus. Any profit made by the store goes to the University to be used as the President and the Board of Trustees authorize.

In this new setting every effort is made to operate the store as an example of good retail practice and as a service to the University family.

"Y" Center

The "Y" Center has been planned as a laboratory of learning—a place where students and faculty may share experiences and build personal interrelationships. It embodies a well considered plan for the community life of the University family.

The center houses student government offices, student publications, scheduling, barber shop, ballroom, photo studio, art gallery, bowling lanes, cafeteria and snackbar, games area, theater, and many other facilities.

Students who desire to serve on student activity committees should apply to the Student Government office on the fourth floor of the "Y" Center.

University Press

The University has modern facilities for the production of both offset and letterpress printing. The many print jobs completed in an average day's production are representative of all types of printing needs. The press is responsible for the printing of the student daily newspaper, the yearbook, and numerous catalogs, brochures, bulletins, and office forms.

Motion Picture Production

The Department of Motion Picture Production has been established to produce documentary, historical, and training films for use in the Church and in schools. A correlated program with drama, music, art, writing, and all creative departments on campus is used to produce films for instruction, television, and public relations. The studio and offices are located about two miles away from the campus, adjacent to the Provo River.

Colleges

Each college in Brigham Young University is an undergraduate college which offers work for the bachelor's degree only. All work beyond the bachelor's degree, in every department, is under the direction of the dean of the Graduate School.

College of Biological and Agricultural Sciences

Rudger H. Walker, Dean (106 HGB)

The departments in the College of Biological and Agricultural Sciences fall naturally into two primary divisions: biological sciences and agricultural sciences.

DIVISION OF AGRICULTURAL SCIENCES

Included in the Division of Agricultural Sciences are the Departments of Agricultural Economics, Agronomy, Animal Science, and Horticulture. Students taking their major work and supporting courses in these departments and in the related basic sciences may prepare themselves for successful careers in agriculture.

Agriculture always has been America's basic industry, and is more important today than ever. The agricultural industry has developed as rapidly as other industries in America in mechanization and efficiency of production. The men and women engaged in agricultural production and marketing and in the related agricultural industries must have an understanding of the new scientific and technological developments that have taken place in agriculture. This, along with practical experience, will better prepare them to serve as farm managers and operators and as technicians in the various phases of agricultural production, marketing, research, and education and in the related agricultural industries.

All students interested in agriculture will be given an opportunity to obtain a broad understanding of the various phases of agriculture. In addition, they may specialize by taking a major in one of the departmental curricula. Students may choose a course of study that will prepare them for farm and ranch operation and management, for employment in related agricultural business or industries, for employment with governmental organizations under civil service, or for teaching and research. For certain kinds of work it will be necessary to place strong emphasis on preparation in the basic sciences and on graduate study for an advanced degree.

Students who have had a background of farm experience and training in vocational agriculture in high school, who are interested in agriculture, and who think they would enjoy working in the agricultural professions are encouraged to register in the College of Biological and Agricultural Sciences. Students who prepare themselves well usually have little or no difficulty in finding satisfactory employment.

AGRICULTURAL EDUCATION

Adviser: Rudger H. Walker

Students who wish to prepare for teaching agriculture should take a major in agricultural education and follow the curriculum outlined in the list of Courses Section under the heading Agricultural Education.

PREVETERINARY COURSE

Adviser: Keith H. Hoopes

Students planning to enter veterinary school may take their preveterinary training at Brigham Young University.

Certain entrance requirements are common to all of the veterinary schools in the United States. The courses listed below are designed merely as a guide to help the student fill these basic requirements. In connection with his pre-veterinary curriculum the student is strongly urged to work toward a bachelor's degree, including course work in animal husbandry and the basic sciences. A bachelor's degree intensifies the student's ability to understand the principles of veterinary medicine and increase his chances of acceptance into a veterinary school, and provides an alternative should the student fail to enter veterinary school.

The student is advised to consult the catalogs of veterinary schools of his choice for specific entrance requirements that may affect him. Attention also is called to the general University requirements for graduation. Students planning to enter veterinary school are not exempt from these general education requirements.

The following courses are included in the entrance requirements of most veterinary schools: English 111, 112; Mathematics 101, 105, 106; Chemistry 105, 106, 223, 351, 352; Zoology 105, 212, 213; Physics 201, 202; Botany 101; Bacteriology 121; Animal Science 153, 207.

DIVISION OF BIOLOGICAL SCIENCES

Included in the division of biological sciences are the Departments of Bacteriology, Botany, and Zoology and Entomology. Students may take courses in any one of these departments to meet their general education requirements for studies in the biological sciences, or they may choose to major in one of these departments.

Courses offered in these departments enable students to obtain a general understanding of the fundamental principles of plant and animal life and the relationships of plants and animals to man and the world in which he lives. Consideration is given to the economic plants and animals used in agriculture and industry, the native and wild plants and animals, the beneficial and injurious insects and micro-organisms, and the parasites responsible for the diseases of plants, animals, and man. The conservation of our natural resources and the management of forest and range lands and wildlife resources are studied. Specialized courses are offered in each of the several branches of the biological sciences for those students who wish to major in one of these fields. Preparation for teaching and research is emphasized.

Students interested in medical technology, medicine, dentistry, forestry or veterinary science may obtain their preprofessional training in the Division of Biological Sciences. Suggested curricula to serve as a guide for students who wish to prepare for these professional fields are shown below.

PREFORESTRY COURSE

Adviser: Kent H. McKnight

Students may prepare themselves for training in forestry by taking the preforestry curriculum during their first two years of college work. This program is under the supervision of the Department of Botany.

During the freshman and sophomore years students are registered for the basic science courses and the general education courses required for training in forestry. Upon completion of this preforestry program they may enroll in a professional forestry school for their major work.

Students should consult the faculty adviser of the preforestry curriculum for detailed information and for assistance in developing their class schedule for registration.

RANGE MANAGEMENT COURSE

Adviser: Earl M. Christensen

Administration of the range management program is under the direction of the Department of Botany, but the range curriculum is drawn from courses offered in several cooperating departments. The complete course requirements are given in the Botany Section of this catalog.

Students should consult the faculty adviser in range management for detailed information and for assistance in developing their class schedules for registration.

PREPROFESSIONAL PLANS FOR MEDICAL AND DENTAL STUDENTS

It is strongly recommended that students who wish to prepare for medical or dental school select course work that will lead to the bachelor's degree. This will give the broad background desired by medical and dental schools, and also will prepare students to enter other professional work in the event their interest in medicine or dentistry does not continue.

Premedical and predental students may follow one of several plans to prepare themselves for professional school:

Plan I:

Complete minimum course work required by a professional school for entrance, not including a baccalaureate degree. The student is advised to counsel with his university adviser in examining the subject requirements described in the school catalog for the school of his choice. About three years of selected course work will meet these minimum requirements and for the most part will include the following courses: Eng. 111, 112; Math. 101, 105, and 106 or 111; Chemistry 105 and 106 and 223, or 111 and 112; 351, 352, 354, 355; Zoology 105, 212, 213, and 363 or 373; Physics 201, 202. Additional recommended courses are calculus, biochemistry, genetics, atomic physics, humanities, and social science.

Plan II:

Complete three years of work at Brigham Young University and transfer to this University acceptable credit for the courses completed in the first year of medical or dental school thereby satisfying the requirements for a baccalaureate degree. (See Basic Medical Sciences Option under the Department of Zoology and Entomology.)

Plan III:

Prior to entering a professional school, complete course work leading to a Bachelor of Science degree in zoology, bacteriology, chemistry, sociology, psychology, or a related field. The student planning to major in zoology should choose the Anatomy and Experimental Zoology Option in the Department of Zoology and Entomology.

PREMEDICAL AND PREDENTAL COMMITTEE

A. Lester Allen, Chairman

Students who wish to prepare for entrance into a medical or dental school should consult the chairman of this committee. The committee will give guidance to students in planning their course of study. It will also schedule and administer the national aptitude tests for premedical and predental students and assist them in making contacts with medical or dental schools.

PREDENTAL HYGIENE

Adviser: A. Lester Allen

Schools of dental hygiene are located at most dental schools and at a few other colleges. The course of instruction is either two years in length, leading to the Certificate in Dental Hygiene, or four years, leading to the bachelor's degree in dental hygiene. The four-year program is strongly recommended. The two-year program may be entered directly after high school, although preference is given to candidates with some college training. The four-year program requires that the first two years be spent in college and the last two in a dental hygiene school. Details of the first two years of training will depend upon the hygiene schools to which the student applies and may be determined in consultation with the adviser.

PREOPTOMETRY COURSE

Adviser: A. Lester Allen

The requirements for admission to schools and colleges of optometry are not identical. Typically, the requirements include courses in English, mathematics, physics, chemistry, and biology or zoology. Schools have varied requirements in psychology, social sciences, literature, philosophy, and foreign language. For details consult optometry school catalogs and counsel with the preoptometry adviser.

PREPHARMACY COURSE

Adviser: A. Lester Allen

Two years of the curriculum of any pharmacy school may be completed at this campus. For specific details the student should consult the adviser.

College of Business

Weldon J. Taylor, Dean

The following departments are in the College of Business:

Accounting
Business Education
Business Management
Economics
Statistics

The purpose of the College of Business is to provide educational experiences which will enable the student to acquire a broad understanding of the interrelations between the business firm, the economy, and society; offer sufficient specialization to enable the student to find a rewarding position in the business world; and assist him in developing a sense of business ethics.

The program is directed toward the achievement of the following specific objectives:

1. Developing skill in the use of quantitative data and theoretical tools in analyzing the problems and policies of the economy and the business firm.
2. Developing an understanding of the human and social aspects of business.
3. Assisting the student to develop those emotional and intellectual capacities which will foster mature and competent judgment.
4. Stimulating both students and faculty members to engage in research and other creative activities to the full extent of their ability and resources.
5. Helping the student acquire the capacity to communicate ideas orally and in writing.

In order that all students who plan to graduate with a major in any of the departments in the College of Business (except business teaching majors) may benefit from a common background of basic information and tools to facilitate their advanced work, they are required to take the core courses listed below. These courses form a basic training normally to be completed during the three years of college work and before the student undertakes specialization in his major area.

Accounting 201, 202, and 342	9 hours
Business Management 340, 347, and 348	9 hours
Economics 111, 112, and 311 or 312	9 hours
Mathematics 105 or 111	3-5 hours
Statistics 221	3 hours

Business education majors may make the following substitutions: Business Education 305 for Business Management 340; Economics 274 for Economics 311 or 312; Economics 453 for Business Management 348.

Economics majors may substitute Economics 453 for Business Management 348.

Economics 111 and 112 listed above apply toward the University general education requirements in the social sciences.

All freshmen entering in Fall Semester 1962 and thereafter are required to complete an additional nine semester hours beyond the general education requirements in order to qualify for either the B.A. or the B.S. degree. The nine hours may be filled by either (a) training equivalent to twelve semester hours of college credit in one foreign language, three of which may be counted as general education credit in humanities (hence, a nine-hour addition), or (b) training equivalent to nine semester hours of college credit in specified mathematics, statistics, logic, and science courses. Mathematics 105 or 111 and Statistics 221 listed above in the college core may be applied toward the second or (b) option. Accounting 232 and 332 and Statistics 241, 330, 331, 432, 434, and 531 may also be used toward the completion of this option.

Consistent with Objective 5 above, it is recommended that all College of Business students take Business Education 320.

M.B.A. PROGRAM

In response to a growing demand for responsible, creative leadership in our business and industrial society, the University has developed a professional program leading to the awarding of a Master of Business Administration degree. This program is designed to serve qualified students from all areas of the University regardless of their undergraduate major. Students contemplating an M.B.A. degree are advised to take a broad program in their undergraduate work. For further information, contact the director of the M.B.A. Program.

College of Education

Antone K. Romney, Dean (118 McKay)

A. John Clarke, Assistant Dean

The College of Education has as its principal function the educating of teachers, counselors, school librarians, principals, supervisors, superintendents, and other professional workers in education.

The following departments are in the College of Education:

Teacher Education

Graduate Department of Education

Office of Educational Research. In addition to the above departments the College of Education has established an Office of Educational Research. This office conducts research projects approved by the college, assists in conducting other educational research projects, and stimulates research on educational problems on the part of faculty members, students, and others. It assists in the planning of research projects being carried out at the University, in school districts of the area, and by other educational groups or agencies. It also assists by recommending capable consultants from the departments to advise and supervise such projects. The program provides some opportunity for graduate students to participate in ongoing research projects and assist in planning their own research programs.

Secondary School Teaching. A student who plans to prepare for a career in high school teaching and related activities may do so either by registering within the College of Education or by registering in one of the other colleges of the University. In the latter case he must complete the required professional education courses and the necessary subject-matter and other courses for the teaching certificate under the joint direction of an adviser in the College of Education and an adviser in his major college.

Special Education. A student interested in preparing to teach classes for students with intellectual handicaps, motor impairments, visual disabilities, or hearing handicaps should plan his program with the coordinator of special education during his freshman year. Individuals who certify in these specialized areas must also obtain regular elementary or secondary teaching certificates. Early planning will enable the student to complete requirements for provisional certi-

fication in special education along with his regular four-year program. Programs for professional certification in the above areas of specialization and in remedial teaching in classes for the academically handicapped are provided in the Graduate Department of Education. Students interested in speech and hearing correction should contact the Speech Department.

Elementary School Teaching. A student interested in elementary school teaching should register in the College of Education immediately. The program is largely prescribed from the beginning of the freshman year. Late entrance into the college may delay graduation and certification beyond the usual four years.

Administrative-Supervisory Certificate. Students seeking certification as an administrator and/or supervisor in Utah must give evidence of at least three years of successful teaching experience, of having a valid teaching certificate, and of having taken twelve semester hours of specified graduate course work. In addition, secondary school administrators and supervisors must give evidence of having completed a master's degree or its equivalent in course work which may include the twelve semester hours. For course listings in this area, see the Graduate Department of Education.

Curriculum and Instruction. Qualified students seeking specialization in the areas of curriculum and instruction may pursue work leading to the Master of Arts, the Master of Education, or the Doctor of Education degrees. The exact requirements of these programs are found in the Graduate School Catalog. Specific graduate courses are also listed under the Graduate Department of Education in this catalog.

Counseling and Guidance. Certification as a school counselor in Utah requires approximately one year of graduate work in counseling and guidance plus two years of successful teaching experience. For course listings in this area, see the Graduate Department of Education.

School Psychology. The Graduate Department of Education and the Psychology Department jointly offer a program leading to state certification as a school psychologist. This program requires a master's degree and ordinarily takes two years beyond the bachelor's degree to complete. To be certified in Utah the person must have a valid teaching certificate. It is also highly recommended that he have at least a year of teaching experience at either the elementary or secondary level.

Secondary School Principalship. Certification as a secondary school principal in Utah requires a minimum of three years of successful teaching experience, five years of study in an accredited college or university terminating in the master's degree (of fifty-five quarter hours—37 semester hours— of credit in graduate study—including a minimum of eighteen quarter hours—12 semester hours— of work selected from three or more areas related to school administration. The courses listed in the Graduate Department leading to the master's degree in educational administration enable the candidate to obtain the Administrative-Supervisory Certificate for Secondary Schools.

Teaching as a Second Career. A student preparing for a career in a field other than teaching may provide himself with a second possibility for employment by meeting the requirements for certification as a teacher while he is completing the other preparation. By planning early in his career, he may do this within the usual scope of the baccalaureate program and with little or no interference with the major program. It should be noted that at present this is particularly feasible for high school teaching, where depth of preparation in two or three subject-matter fields is desired, but it also may be possible under special arrangements in the elementary school program.

Early Decisions Desirable. In either case the student is urged to make the decision as early as possible in his college career to avoid conflicts in the scheduling of courses and to take fullest advantage of the maturing effect produced by spacing the study of teaching over a period of time.

How to Proceed. Those who decide to register in the College of Education should transfer to that college at once. All others will register in the colleges in

which they are majoring. Every candidate for a teacher's certificate, however, regardless of the college in which he is registered, must have his certification program approved in the Teacher Certification Office, Room 111 McKay Building, before he enters the first course in the professional education sequence.

Cycle Organization. To insure adequate facilities and opportunity to take classes, it has been necessary to organize the programs of the College of Education into cycles. Students in elementary education enter the cycles as beginning freshmen according to alphabetical listing of surnames. Students in secondary education are placed in the appropriate cycle according to subject-matter department. Inquiries concerning the proper cycle may be made in Room 111 McKay.

Because it is necessary to keep the cycles balanced, students will not be admitted to the first course without proper approval of their programs.

Students not meeting the academic and other standards of the University may be asked to withdraw from the teacher certification program.

All students in the teacher certification program will be required to meet minimum standards in speech and hearing. Speech and hearing tests may be given as part of the course requirements in the first course in the certification cycle.

Each student who undertakes preparation for teaching will be provided with a brochure describing the requirements and procedures. He will be expected to keep a record of his program and his progress.

How to Become Certified. A student who completes the certification requirements set forth by the College of Education, regardless of the college in which he is registered, is eligible for a certificate issued by the Utah State Board of Education. Certification is approved by that board after application for certification has been made personally by the student through the dean of the College of Education, who in turn recommends the student to the state board.

All students who have met the requirements of the state and University are recommended when they apply for certification. Application should be made by all students who are successfully completing their requirements upon completion of 94 semester hours of credit. Applications should be picked up in and returned to the Teacher Certification Office, 111 McKay.

Students will be held for certification requirements under the catalog in effect during the year in which they were admitted to the education program.

Students expecting to graduate in June should file their completed application with the Teacher Certification Office not later than January 15, and students expecting to graduate in August should file their application not later than March 15.

A student may prepare himself to be certified as any of the following:

- Teacher in kindergarten
- Teacher in elementary schools
- Teacher of special classes for handicapped children
- Teacher in secondary schools
- Teacher of industrial arts in secondary schools
- Teacher of vocational homemaking in secondary schools
- Teacher of unit shops in industrial arts
- Supervisor and administrator of industrial technical education
- Librarian in secondary schools
- Counselor
- Administrator-supervisor in elementary schools
- Administrator-supervisor in secondary schools
- Superintendent

Certification in Other States. Students planning to teach in states other than Utah should check with the Teacher Certification Office, 111 McKay, for the special requirements of those states.

First Certification Requirements. Certification of teachers is a function of the Utah State Board of Education. The Board of Education publishes requirements for certification in booklet form and in supplements. The present policy of the board is one of stating minimum requirements in general terms. This is

done to encourage the institutions that prepare teachers to engage in continuous study of the requirements, going beyond the minima in whatever ways seem desirable. While the board is always able to certify a candidate without recommendation from a university, it chooses to require the recommendation of the officer in charge of teacher preparation in each institution. This requirement is of assistance not only to the state board, but also to the institution because of the assurance that its efforts to improve the program of preparation will not be made ineffective by the ready availability of ways of going around the minimum requirements.

Alterations in the requirements may be made from time to time. They will not be made retroactive in the case of any student, but may be made to apply to uncompleted portions of his program where this can be done without difficulty.

Requirements for a Second Certificate. An individual who has met the requirements for a general elementary school certificate may obtain a general secondary school certificate by meeting certain additional requirements. The state's requirements for subject-matter major, minor, or composite teaching major must be completed. In addition, the individual must complete certain courses in methods of teaching and in student teaching at the secondary school level. An individual who has met the requirements for a general secondary school certificate may obtain a general elementary school certificate by completing certain courses in methods of teaching and in student teaching at the elementary school level. Specific instructions for these programs are available in the Teacher Certification Office, Room 111 McKay.

Fifth-Year Program for Teachers in Service. Advancement in teaching, both professionally and economically, requires study in some depth beyond the bachelor's degree. State departments of education increasingly are raising certification standards to the level of a five-year preparation program. To meet this need Brigham Young University offers a carefully planned fifth-year program. It consists of the equivalent of a master's major or minor in professional education, with a major or minor in the teacher's subject-matter field. Details of the program may be had through the Teacher Certification Office, Room 111 McKay. The program outlined by the University will meet the requirements of the five-year professional certificate of most states.

Selection of Candidates. Candidates for certification as teachers should expect to be carefully selected, even though their interest in certification is secondary to another career at the time. Only individuals of high caliber who have acquired a substantial general education, whose mastery of their major and minor fields is unquestioned, and whose personal character reflects the best ideals of our culture will finally be recommended for certification.

The selection of those who will be finally recommended for certification is a continuous process. It begins when the student first announces his intention of seeking certification. It continues through all stages of his education. Among other things, it is necessary to maintain a Brigham Young University cumulative grade-point average of 2.25 or better to remain in the program ("C"=2.00).

No course in a student's secondary teaching major, teaching minor, or composite teaching major in which he receives a grade of "D" will count for certification unless he has at least a 2.5 grade-point average in courses taken from that department, and also has the approval of the chairman of that department. If the student does not have a 2.5 grade-point average, he must repeat the class for which he received a "D" or take additional hours of the class if elective for the teaching major or minor.

Students Transferring from Other Colleges. To transfer from another university to the College of Education at Brigham Young University the student must have a cumulative grade-point average of 2.25 or better.

Students transferring to the College of Education from another college within Brigham Young University must have a Brigham Young University cumulative grade-point average of 2.25 or better.

To continue to take sequence courses in professional education or to remain in the College of Education the student must maintain both a Brigham Young University cumulative grade-point average and a semester grade-point average of 2.25 or higher.

THE LABORATORY SCHOOL

Director: Edwin A. Read

Assistant Directors: J. Clair Morris, curriculum materials development; H. David Nelson, secondary school; Ruel A. Allred, elementary school

The Laboratory School (Kindergarten through Twelfth Grade) is one of three departments within the College of Education. It assists the College of Education in the preparation of teachers by providing observations, demonstrations, and other laboratory experiences for teachers and school administrators in training. Educational research of various types and experimental projects are conducted to investigate promising ways of improving educational programs. The Laboratory School is staffed with a carefully selected academic faculty working under the supervision of a director, an assistant director of the elementary school, an assistant director of the secondary school, and an assistant director of curriculum materials production. Faculty members and students desiring to visit the school should make arrangements through the office of the assistant director of the elementary school.

In keeping with the laboratory functions of the school, pupils are frequently under observation and study, and classes are subject to various kinds of experimental treatment for the purpose of improving instruction. Regardless of these functions, however, the instruction is kept at a high level of quality, since one of the principal purposes of the school is to demonstrate superior educational practices for the benefit of teachers-in-training and teachers-in-service.

Moral and religious education is a constant part of the instruction in this school. Pupils are admitted under the assumption that they will adhere to L.D.S. standards of personal conduct, dress, and morality. Observance of these standards is a requirement for continued enrollment in the Laboratory School. Pupils are also required to observe the Utah compulsory school attendance law.

Enrollment in each grade of the Laboratory School is limited to the number of pupils for whom adequate educational services can be provided. Pupils are accepted on the basis of established criteria which are important in carrying on the unique functions of the school. Applications for admission should be filed with the registrar between January 1 and June 1 preceding enrollment in September. Forms for this purpose are available in the Registrar's Office, 298 Education Building, Brigham Young University, Provo, Utah.

Pupils admitted to the Laboratory School may continue their education through the graduate program of the University providing established academic and behavioral standards are maintained. They have many of the advantages of the University plant, such as use of libraries, gymnasiums, laboratories, shops, athletic fields, and auditoriums.

Elementary Laboratory School

The elementary section of the Laboratory School covers the range from the kindergarten through the sixth grade.

A staff of well-qualified instructors, together with the facilities offered by the University and the assistance given by special supervisors, provides a wide range of experiences for the children. Much attention is given to individual needs and interests and to the development of special abilities of pupils. The elementary program includes instruction in art, crafts, and vocal and instrumental music.

The school serves as a laboratory for educational research and experimentation, and is a center for the preparation of teachers in elementary education.

Secondary Laboratory School

Pupils completing the first six grades are regularly transferred to the junior high school. Here departmentalization begins, permitting variations in courses and a wide range of contact with expert instructors. Broad exploratory experiences are provided.

Pupils completing the three years of work prescribed for the junior high school are admitted to the senior high school. Pupils graduating from the senior

high school are expected to have completed eighteen units of study in three years. Equal credit is given in all subjects for equal amounts of time spent in the classroom. One unit of credit is granted for each class which meets five days per week for thirty-six weeks. All required classes must be included in the program of each pupil who qualifies for graduation.

A rich program of athletic and social activities is provided for secondary school pupils under the direction of the faculty and the student body organizations. Pupils participate in interscholastic athletics, speech, art, music, and commercial competition. High school students also have the advantage of participation in selected activities sponsored by the University.

Brigham Young University High School is a member of the Utah High School Activities Association, meets all requirements of the Utah State Board of Education, and is accredited by the Northwest Association of Secondary and Higher Schools.

Program of Studies

Junior High School. The junior high school organization is designed to assist children in the transition from the elementary to the secondary school. The academic curriculum is arranged to fit the particular needs of this age group and to prepare them for wise selection of course offerings in the senior high school. Seventh and eighth grade students plan and conduct their own social and recreational activities under the direction of faculty advisers. Ninth graders are considered to be members of the senior high school student body in the Laboratory School.

Students showing high potential in achievement are permitted to take accelerated work in mathematics and language arts in anticipation of enrollment in advanced classes during the last year of high school.

7th Grade subjects:

Required: English, social studies, mathematics, reading, speech, health and physical education, and general music.
Electives: Chorus, band, and Spanish.

8th Grade subjects:

Required: English, social studies, mathematics, general science, reading, art, physical education, vocal music, and industrial arts or homemaking.
Electives: Chorus, band, algebra, and Spanish.

9th Grade subjects:

Required: English, social studies, science, mathematics, physical education, and religion.
Electives: algebra, typing, chorus, band, art, industrial arts or homemaking, speech, French, German, and Spanish.

Senior High School. Students desiring to graduate from B.Y.U. High School and to qualify for college entrance at the same time must complete the following requirements (A unit of credit is given for any subject that is taken five times a week for thirty-six weeks):

1. A total of eighteen units is required in grades 10, 11, and 12.
2. One unit of physical education. Students who have some physical disability may be excused from this requirement upon presentation of a statement from the family physician attesting to this fact.
3. One-half unit of health.
4. One-half unit of senior guidance.
5. One unit of mathematics selected from algebra, geometry, or general mathematics.
6. Three units of English.
7. Two units of social studies: American history and government, and either U.S. government and economics, development of civilization, or current history.
8. One unit of science.
9. While at Brigham Young University High School, the prescribed course in religious education must be followed satisfactorily by all students. One

religion class each year is required until graduation from the seminary program (three units).

10. A broad selection of courses in the fine and practical arts is available to all students.

Senior students who have completed sixteen Carnegie units and have demonstrated outstanding academic ability may be permitted to enroll in advanced classes at the high school or college level provided they have the recommendation of their high school principal. Other students may enroll for Home Study to resolve programming difficulties.

SENIOR HIGH SCHOOL COURSES

Subject	Days		Year Taken	Credit
Practical Arts				
Industrial Arts I and Mechanical Drawing	5	Elective	9-12	1 unit
Homemaking I	5	Elective	9-12	1 unit
Home Living	5	Elective	10-12	1 unit
Business				
Shorthand, Beginning	5	Elective	11-12	1 unit
Typing I and II	5	Elective	9-12	1 unit
Bookkeeping	5	Elective	10-12	1 unit
Office Practice	5	Elective	11-12	1 unit
Language Arts				
English II	5	Required	10	1 unit
English III	5	Required	11	1 unit
English IV	5	Required	12	1 unit
Journalism	5	Elective	10-12	1 unit
Language				
French I and II	5	Elective	9-12	1 unit
German I and II	5	Elective	9-12	1 unit
Spanish I and II	5	Elective	9-12	1 unit
Speech				
Speech I	5	Elective	9-12	1 unit
Forensics	5	Elective	10-12	1 unit
Interpretive Speech	5	Elective	10-12	1 unit
Mathematics				
Functional Math	5	Elective	9-12	1 unit
Algebra I and II	5	Elective	9-12	1 unit
Geometry	5	Elective	9-12	1 unit
Trig and College Algebra	5	Elective	9-12	1 unit
Calculus	5	Elective	9-12	1 unit
Science*				
General Science	5	Required	9	1 unit
Biology	5	Elective	10-12	1 unit
Chemistry	5	Elective	11-12	1 unit
Physics	5	Elective	12	1 unit
Health, Physical Education, and Personal Development				
Physical Ed. I (boys and girls)	5	Required	10 & 12	1 unit
Health	2½	Required	10	½ unit
Senior Guidance	2½	Required	12	½ unit
Athletics	5	Elective	10-12	
Drill team (girls)	5	Elective	10-12	
Religious Education				
Book of Mormon	5	Required	9	1 unit
New Testament	5	Required	10	1 unit
Church History	5	Required	11	1 unit
Book of Mormon (senior)	5	Elective	12	1 unit

Fine Arts

Art I and II	5	Elective	9-12	1 unit
Chorus	5	Elective	10-12	1 unit
Band	5	Elective	10-12	1 unit

Social Science**

American History & Gov't.	5	Required	11	1 unit
World History	5	Elective	10	1 unit
U.S. Government & Econ.	5	Elective	12	1 unit
Current History	5	Elective	12	1 unit

*These subjects are only partially elective as one of this group must be taken.

**One of these courses is required in addition to American history and government.

College of Family Living

Virginia F. Cutler, Dean (1206 SFLC)

The four-year academic program in family living provides first and foremost a broad liberal education, and second, preparation for a profession. All the colleges of the University contribute to the curriculum, providing background in the arts, humanities, and sciences to be applied and integrated into areas of specialization which may continue through the baccalaureate to an advanced degree. The college contributes to the total University community by offering nonmajor courses designed to develop insight into and understanding about various aspects of family life.

Much of the work that was at one time confined to the home has moved out into the community and has resulted in highly specialized, professional services to all homes, and families. Areas of specialization include clothing and textiles, family life education (with options in HDFS for nursery school and elementary school teaching or in homemaking and family life education for secondary school teaching), food and nutrition, and housing and home management. These four areas constitute the departments of the college. Successful completion of the work prescribed in any one department or option is rewarded with the baccalaureate, which attests to the competency of an individual to assume such professional responsibilities in the community as teacher, dietitian (after internship), extension agent, or fashion designer.

REQUIREMENTS

Entrance into the college presupposes completion of three units of high school English and two units of high school mathematics, with background in social and physical science and home economics. All major curricula include work in the physical, social, and biological sciences and the humanities as well as some work in each of the college departments. These requirements are detailed in departmental descriptions.

AFFILIATION WITH THE MERRILL PALMER INSTITUTE

Through a cooperative arrangement with the Merrill Palmer Institute of Human Development and Family Life in Detroit, Michigan, the college sends several students to the institute each year. Seniors and second-semester juniors from any department are eligible. Criteria for selection are these: scholarship, professional interest, and worthy representation of the Church and the University. Credits earned at the institute are accepted and credited to the major field at Brigham Young University.

GRADUATE STUDY

Students who have completed all requirements for the bachelor's degree and who wish to continue their studies are registered in the Graduate School and are under the jurisdiction of the dean of that school. The college, through approval of the Graduate Council, provides curricula leading to the master's degree in child development, family relationships, food and nutrition, and homemaking education. The doctor's degree is offered in child development, family relationships, and marriage counseling. In order for a student to participate in these programs

he must apply to the Graduate School and be admitted as a degree-seeking student. Because of attractive opportunities and a serious need for the contributions of highly trained professional persons, outstanding students are encouraged to pursue graduate studies.

PROFESSIONAL AND HONORARY CLUBS

Sigma Delta Omicron is a professional club affiliated with the Utah and American Home Economics Associations. Membership is extended to all students of the college. Special-interest sections of the club are sponsored by departments.

Omicron Nu is a national honorary society whose objectives are to recognize superior scholarship, to aid in the development of qualities essential to leadership, and to encourage research in the professional fields related to home and family living. Juniors and seniors of the college with high academic standing, ability in creative thinking, and potential leadership ability are eligible for election to membership. Graduate students meeting these requirements are also eligible.

SCHOLARSHIPS AND AWARDS

The college recognizes outstanding accomplishments of students at the Honors Program the night preceding baccalaureate exercises. Following is a description of awards presented:

Class Awards

Zina Young Williams Card Award (established by Zina Y. C. Brown). A featherweight sewing machine is awarded to a freshman who has completed 31 credit hours with a grade-point average of 3.5 or better and who exemplifies the great qualities of the first teacher in the Ladies Work Department of Brigham Young Academy.

Sigma Delta Omicron Scholarship (established by Dr. Marion C. Pfund). A \$150 scholarship is awarded to a sophomore who has completed 62 credit hours with a grade-point average of 2.65 or better with no grade lower than "C." Work must include six hours each of English and chemistry; three hours each of bacteriology, psychology, and food and nutrition; and two hours each of health and physical education. Recipient must have been an active member of Sigma Delta Omicron Home Economics Club for two years.

Elsie Maughan Belliston Library Award. Some professional books and/or periodicals are awarded to a junior having successfully completed 93 credit hours with a grade-point average of 3.0 or better. High ethical standards and dedicated professional interest also are considered.

Elizabeth Cannon Sauls Award. The sum of \$50 is awarded to a deserving junior whose grade-point average, character, and professional potential are rated in the upper ten percent of the class.

Hazel Noble Medal. A gold medal is awarded to a graduating senior whose womanly qualities, professional attitude, and scholastic interests are reflected in her daily living.

Gamma Phi Omicron Alumnae Award. An engraved silver tray is given to a senior of high scholastic standing who has demonstrated most adequately the ability to carry a dual role—that of homemaker and student.

Leah D. Widtsoe Sterling Award. A silver bowl is awarded to a senior of sterling character who has made significant progress during her years of study and who has gone the "second mile" to render service to classmates, college and university.

Departmental Awards

Clothing and Textiles—Maxine T. Grimm hand-woven dress fabric to a senior.

Family Life Education: HDFR Option

Achievement plaque to senior male student

Achievement plaque to senior female student

Frances P. Barlow pewter pitcher to senior

Family Life Education: Homemaking Education Option
Achievement award to senior student

Food and Nutrition

Susa Young Gates \$50 scholarship to a junior particularly interested in pursuing studies related to the Word of Wisdom (established by Leah D. Widtsoe).
Housing and Home Management—Utah Valley Furniture Award to a senior.

The Betty Porter Memorial Scholarship is awarded annually to a girl majoring in family life education. The recipient is selected on the basis of integrity, scholastic achievement, professional promise, and financial need.

Graduate Awards

Walter Ellis Trunnell Medal (established by Dr. Jack B. Trunnell). A gold medal is awarded to a graduate student who has demonstrated outstanding research ability through the development of a thesis, the results of which will benefit the family and the Church.

Asahel D. Woodruff Tuition Scholarship (established by a recipient of benefices from the Woodruff family). A \$200 tuition scholarship is awarded to a Ph.D. candidate who is engaged in studies related to home and family values.

College of Fine Arts and Communications

Conan E. Mathews, Dean (A-410 FAC)

The following departments are in the College of Fine Arts and Communications:

Art
Communications
Dramatic Arts
Music
Speech

The policy of the University has always provided for a liberal patronage of the fine arts. The organization of the College of Fine Arts in 1925 was the result of desire to offer students greater opportunities for better coordinated academic and professional growth. At the opening of the school year 1963-64 a Department of Communications was added to the college, and the name was changed to the College of Fine Arts and Communications.

With exceptionally well-prepared faculties, who have undergone extended study in recognized schools and arts centers, with a new building designed and equipped to integrate all aspects of the fine and communicative arts, the college has become nationally known for the artistic and academic work done under its direction.

All courses offered in this college that lead to the baccalaureate are the cultural equivalent of other college courses offered in the University, differing from them mainly in respect to the emphasis placed on the study of the fine arts.

Majors are selected from the work offered in the departments; minors may be selected from them or from other departments in the University which offer allied work.

DEPARTMENT OF ART

The preparation of creative leaders in the various fields of the plastic and graphic arts and the education of appreciative audiences for these arts constitute the two-fold purpose of the Art Department.

Optional programs leading to a major in art are planned for those who are preparing for careers in art education, commercial art, interior design, painting, printmaking, sculpture, and ceramics, or for those who are pursuing a general course in art. All options lead to the Bachelor of Arts and Bachelor of Fine Arts degrees.

The Master of Fine Arts degree is a two-year program. A thesis is not required, but a one-man show and a terminal project are essential parts of the program.

Master of Arts degrees are offered in the fields of painting and sculpture and in design, which may include ceramics, crafts, interior design, print-making, and commercial art.

A collection of more than seven thousand original works of art, by both American and European artists, is owned by the University. Regularly changing exhibitions of work by contemporary artists also contribute to general appreciation and to the instructional program. Exhibitions of students' work are held regularly for analysis and criticism, and for furthering professional growth. The Department of Art sponsors a studio guild, an organization by and for the students, through which special lectures, demonstrations, and trips to galleries contribute to growth and interest.

DEPARTMENT OF COMMUNICATIONS

The principal objectives of the Department of Communications are to prepare qualified students for professional careers in the major areas of mass communication and to help all students in the University gain greater understanding of the mass media as they affect them in daily life.

The professional education program in communications offers specializations in the following areas leading to the Bachelor of Arts degree: Advertising and public relations; journalism (newspaper, magazine and radio-television journalism); photography; radio and television; and teaching of journalism. Graduate studies leading to the Master of Arts degree provide advanced courses and seminars in specialized areas of the discipline.

Course offerings are supported by laboratory facilities in the areas of advertising, reporting and editing, photography, and radio and television. Broadcasting instructional facilities include the studios of KBYU-TV and KBYU-FM. Students in advertising and journalism have opportunity to combine their instructional program with staff assignments on the Daily Universe, campus newspaper.

As a link between the student's academic preparation and his professional career, professional internships are arranged for qualified seniors and graduates. In these internships supervised experience is gained on the staffs of selected newspapers, magazines, radio and television stations, and advertising agencies and offices.

The department sponsors a series of lectures on communications throughout the year to bring students in contact with leading professionals and scholars in the field of communications. Professional activities are also stimulated by student organizations in advertising, journalism, and radio and television.

DEPARTMENT OF DRAMATIC ARTS

The Department of Dramatic Arts and the Department of Speech are administratively independent of one another; however, in order to more completely prepare the student for teaching in the schools and to meet the competition in professional theatre, the faculty members and courses from both departments are utilized to achieve these purposes.

The Department of Dramatic Arts seeks to develop the student through a broad, intensive program. Twelve major productions and many one-act and experimental plays constitute the annual offerings. Recently the department was highly honored in being chosen a second time by the American Educational Theatre Association and the USO to play at Far Eastern military bases including Japan, Okinawa, Korea, the Philippines, Guam and Hawaii. Beginning in the fall of 1964 the department will be operating a major theatre, an arena theatre, and an experimental theatre, with the latest and most workable equipment to be found in any of the theatres of the United States.

The department holds membership in the American Educational Theatre Association, the National Theatre Conference, the Rocky Mountain Theatre Conference, and the Western Speech Association.

DEPARTMENT OF MUSIC

The main objectives of the Department of Music are to help each student attain through music the skills and proficiencies of an artist while he is gaining a broad general education; to develop talent to the highest degree possible; to train music teachers for a noble profession; and through association with dis-

tinguished artists and teachers, to help all B.Y.U. students acquire discriminating taste and sound critical judgment.

The Bachelor of Arts degree is available with majors in music theory and applied music. The Bachelor of Music degree is available with a major in music education. The master's and doctor's degrees may be taken in music, music theory, and music education.

Students who desire to become composers, arrangers, or music copyists, or who wish to teach theory of music should pursue a major in music theory.

Every music major studies a certain amount of applied music in order to develop proficiency on his major instrument or in voice. Students who wish to become skilled performers in order to qualify themselves to assume positions in the concert or professional world should major in applied music.

Prospective school teachers have the opportunity to major in vocal or instrumental music. Each program is designed to emphasize the essential aspects of preparation for teaching in public schools. The master's degree program in elementary or secondary school music is designed to prepare teachers, supervisors, and music consultants who can help classroom instructors teach music effectively.

A cultural atmosphere seldom equaled is provided through concerts and recitals, including visiting groups and artists. The Department of Music sponsors more than 150 concerts and recitals each year, not including the lyceum service provided by studentbody activities and by lyceum committees.

There is a musical organization for every student at B.Y.U. who is interested in singing or in playing a musical instrument.

DEPARTMENT OF SPEECH

The public address area of the Department of Speech provides practical training and experience to the general university student in public speaking, discussion and parliamentary debate. This is particularly applicable to the prelaw, business and teaching professions. In addition to course work several competitive speaking contests are sponsored to encourage speaking activities. These include the Donald C. Sloan Extemporaneous Speaking Contest on current events which offers \$110.00 in tuition prizes, the Heber J. Grant Oratorical Contest on a faith-promoting subject, and the Delta Phi Extemporaneous Speaking Contest on religious topics. The department also sponsors the Speakers Forum at the close of each semester.

The B.Y.U. Forensic Association, under the direction of the Speech Department, offers an opportunity for all students to participate in competitive speech activities on both the intramural and intercollegiate levels. More than 160 students participate each year. Interested students in all fields of study participate in about thirty debate trips during the academic year. Students travel nearly 40,000 miles to many parts of the nation. During the past four years (1960-63) B. Y. U. has qualified for the National Debate Tournament at West Point three times. Only thirty-six schools from among the nation's more than 2,000 colleges and universities are selected to participate in this tournament.

The speech pathology-audiology and speech science (also known as speech correction or speech therapy) areas of study prepare students in speech and hearing rehabilitation for positions with the public schools, community speech and hearing centers, university, and college clinics, hospitals, and private practice. The student deals with the diagnosis, elimination, and alleviation of speech defects or with the development and improvement of speech intelligibility. He also studies the function of the ear, impairments of hearing, and the education or re-education of the person with a hearing loss. The state certificate in speech and hearing therapy can be obtained from a four-year program. The national American Speech and Hearing Association certificate in speech pathology or audiology may be obtained from a master's program.

FINE ARTS COLLECTION

The fine arts collection of paintings, sculpture, drawings, etchings, engravings, monotypes, lithographs, and reproductions of works of art is as follows:

A. Memorial Collections.

1. The Lee Greene Richards Collection of 36 paintings.

2. The James T. Harwood Collection of 90 paintings, etchings, and drawings.
3. The John Hafen Collection of 24 paintings.
4. The Elbert H. Eastmond Collection of 64 paintings.
5. The John Willard Clawson Collection of 85 paintings and sketches.
6. The Maynard Dixon Collection of 85 paintings and sketches.
7. The Edwin Evans Collection of 61 paintings.
8. The Rose Hartwell Collection of 71 paintings.
9. The Rose Hartwell Crafts Collection.
10. The Joseph Imhof Collection of lithographs.
11. The Merlin A. Steed Collection of 70 paintings.
12. The Mahonri Young Collection of 304 sculpture pieces (bronze and plaster), 326 paintings, 5,308 water colors and drawings, 1,112 etchings and prints.

Acquired with the Mahonri Young Collection are oils, pastels, drawings, water colors, etchings, and other prints totaling 2,116 pieces. Among the artists represented above are such names as Albert Bierstadt, Clifford Beal, Camille Corot, Arthur B. Davies, William Glackens, Child Hassam, Winslow Homer, Edward Manet, Jean F. Millet, Joseph Pennell, John Twachtman, Dorothy Weir, J. Alden Weir, James Whistler, Harry Wickey, and others.

13. LeRoy Pharis Collection of 49 pieces of Chinese ivory carvings.
- B. Other Utah artists represented: George M. Ottinger, Daniel Weggeland, Loris Pratt, John B. Fairbanks, Samuel Jepperson, Minerva Teichert, Alma Wright, Waldo Midgley, Calvin Fletcher, Cornelius Salisbury, Joseph Everett, Henri Moser, Torlief Knaphus, Avard Fairbanks, Henry Rasmussen, B. F. Larsen, Edgar M. Jensen, Glen H. Turner, J. Roman Andrus, Warren B. Wilson, Richard L. Gunn, and Lavie H. Earl.
- C. Other well-known national artists represented: Lee Randolph, George Elmer Browne, Fern Gary, Gordon Grant, Marie A. Hull, Haley Lever, Clarence Millet, Luis F. Mora, Chauncey F. Ryder, Matteo Sandona, W. Lester Stevens, Anthony Thieme, John Law Walker, J. Alden Weir, John Whorf, Eliot Daingerfield, George Pierce Ennis, John E. Costogan, George Henry Taggart, William Morris, Jon Corbino, J. Connaway, Robert Brackman, Peter Hurd, Marguerite Pearson, Henry W. Ranger, John Twachtman, John F. Carlson, Gene Kloss, Earle Loran, Emil Bistran, Umberto Romano, Lez Haas, Eric Bransby, Ralph Blakelock, Frederick E. Church, Thomas Cole, Thomas Doughty, Sanford Gifford, Thomas Hill, Dominique Ingres, George Inness, Eastman Johnson, John Kensett, Ernest Lawson, John Marin, Homer Martine, Pietro Rotari, Joshua Shaw, Everett Shinn, and Benjamin West.
- D. Original etchings, lithographs and other prints, including the work of Ernest Fiene, Rockwell Kent, Joe Jones, Reginald Marsh, Waldo Pierce, Herbert Dunton, Boardman Robinson, Otis Dozier, Lawrence Barrett, John Taylor Arms, Kaethe Kollowitz, Gene Kloss, Conrad Buff, Reynold W. Weidenaar, Hans Erni, Fernand Leger, Glen Alps, Harry Sternberg, and Wendell Black. There are also 24 Rembrandt replicas.
- E. Oriental art, including Japanese paintings, prints, and reproductions.
- F. The Dr. O. K. Cosla Collection. Dr. and Mrs. Cosla of New York City have to date given B.Y.U. three great paintings—a Rubens, a Correggio and a Nattier. Dr. Cosla has a program of making other equally significant gifts to B.Y.U. These come from a collection of European masters begun by the Cosla family in Europe in 1790. Dr. Cosla brought the collection to the United States prior to World War II in order to keep it intact. B.Y.U. is fortunate and grateful to be recipient of pieces from this famous collection.
- G. The Karel Waterman Collection. Karel Waterman, a Dutch collector and connoisseur of European art, brought a rare small collection of paintings

to the United States following World War II. It is described as a superb collection of northern European masters, including such names as Rembrandt, Van Dyck, Ruysdael and Van Ostade. Mr. Waterman to date has given one large painting attributed to a disciple of Lucas Cranach and has placed on extended loan at B.Y.U. twelve paintings by Dutch 17th and 18th Century artists. These include such names as Ruysdael, Van Dyck, Van der Veld, Van Goyan, Van Ostade, and others.

- H. The Dr. and Mrs. Burtis France Robbins Collection was given to Brigham Young University in 1962 and consists of a total of 25 paintings and prints.
- I. Reproductions of famous works of art, including various types of modern art.
- J. Large collections of slides, including natural color slides and the George K. Lewis Memorial Collection of Kodachrome slides.

LOTTA VAN BUREN COLLECTION

The Lotta Van Buren collection of ancient instruments and music contains rare old instruments, modern reproductions of ancient instruments, literature on ancient instruments, and a library of old instrument scores. In this collection are also some ancient costumes and pictures of interest.

Among the instruments, some of which were made in the Fifteenth Century, are the following: a viola da gamba (once owned by George Frederic Handel), five viols, a cittern, an Arabian lute, a two manual harpsichord, a virginals, an octavina, two clavichords, a hurdy-gurdy, and other such instruments.

The Van Buren collection is one of the few collections in the United States in which all instruments are in playable condition. Several concerts in which some of these instruments are used are given each year.

This unusual collection, housed in a specially equipped room (E 400, Harris Fine Arts Center), is open for inspection by the public.

General College

Ernest C. Jeppsen, Dean (A-261 ASB)

General College has been added to the academic structure of Brigham Young University to meet more adequately the objectives and changing educational demands of the University. The college is designed to help students develop responsible citizenship in the Church and in the state, to acquaint them with their cultural heritage, and to lay the foundations for useful and productive lives in a democratic society. To achieve these objectives and to provide for other educational needs of students, General College has been organized into the following units:

- Department of Industrial Education
- Technical Institute
- Skills Improvement Service
- American Indian Education Program
- Division of Provisional Registration

DEPARTMENT OF INDUSTRIAL EDUCATION

Ross J. McArthur, Chairman

The Department of Industrial Education offers programs leading to the baccalaureate and the master's degrees. The baccalaureate degree program prepares industrial education teachers for junior and senior high schools; the master's degree program provides advanced educational preparation for teachers, supervisors, and administrators in industrial education. In addition, this department offers the baccalaureate degree program in building construction technology, drafting technology, and tool and manufacturing technology.

For further information regarding these programs see the Department of Industrial Education section of this catalog.

TECHNICAL INSTITUTE

Ernest C. Jeppsen, Director

The Technical Institute offers the associate degree in nursing for those students fulfilling the University requirements for graduation from the two-year program in nursing.

Students desiring technical training in the special fields of business technology, commercial art, computer programming technology, engineering technology, genealogical research, general agricultural technology, homemaking technology, industrial technology, library technology, or photographic technology may register for one of the two-year programs offered in the Technical Institute. Upon completion of one of these prescribed programs the student will receive a two-year technical certificate indicating his proficiency in that field.

For further information regarding this program see the Technical Institute section of this catalog.

SKILLS IMPROVEMENT SERVICE

Howard T. Reid, Chairman

Students admitted to the University on academic warning come under the jurisdiction of the Skills Improvement Service, which helps these students develop abilities and skills that will allow them to compete more effectively with other students at Brigham Young University. Special assistance is available in such areas as reading, writing, mathematics, spelling, and effective study.

For further information regarding this program see the Skills Improvement Service section of this catalog.

AMERICAN INDIAN EDUCATION PROGRAM

Paul E. Felt, Director

The Indian Education Program at Brigham Young University meets the needs of Indian students by offering work on the following levels:

Vocational (post high school)

Technical and semi-professional (2-year collegiate, terminal)

Undergraduate (4-year baccalaureate)

Graduate

All Indian students are asked to work out their individual programs with the adviser to Indian students, who will call upon the faculty of the various departments of the University to assist as required.

Indian Studies Major or Minor

All Indian students, or others who desire to prepare themselves to work with Indian peoples, will select a professionally or occupationally oriented major and in addition will take 24 to 32 hours in approved courses in Indian studies. This combination may constitute a double major or a major and a minor, as the major department and the adviser to Indian students may require.

DIVISION OF PROVISIONAL REGISTRATION

Ernest C. Jeppsen, Chairman

Each year many students come to the University undecided as to their major field of study. These students register in the Division of Provisional Registration. In this division, students are assigned a registration adviser who assists them with their academic problems. During the one or two years they are in the division, students pursue the general programs outlined on the following pages. At the end of this time they should select a major, transfer to the appropriate college, and continue their studies toward a baccalaureate degree. Following are the suggested programs:

Biological Science, Premedical, Predental, and Preforestry

A student interested in botany, bacteriology, and zoology or planning to apply to schools of medicine, dentistry, or forestry should register for the follow-

ing courses. This will enable him to transfer from General College to a major department at any time during his freshman or sophomore year and continue work toward a baccalaureate or other professional degree.

To ensure completion of all requirements for the school of his choice the preprofessional student should contact the chairman of the premedical-dental committee by the end of the freshman year. A student desiring to major in botany, bacteriology, and zoology should likewise contact the chairman of the department of his choice.

Freshman Year				Sophomore Year			
	F	S			F	S	
Relig. 121, 122	2	2		Relig.	2	2	
Eng. 111, 112	3	3		Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$		Chem. 111, 112	4	3	
Math. 101, 105-106 or				Physics 201, 202	4	4	
111	3	5		Bot. 201	1		
Bot. 101 or Zool. 105	3			Bot. 376 (and 378) or			
Bot. 110 or Zool. 212		3-4		Zool. 363	4		
Health 130	2			Bact. 321 and 322		4	
Soc. sci. or humanities ..	3			Electives	1	3	
Hist. 170		3					
Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$ -17 $\frac{1}{2}$		Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$	

Business

The following is a suggested two-year program for students having a general interest in business but undecided about the particular area in which to major. With the exception of English composition and courses with indicated prerequisites, the freshman and sophomore courses may be taken interchangeably. Students may transfer into the College of Business at any time.

Freshman Year				Sophomore Year			
	F	S			F	S	
Eng. 111, 112	3	3		Relig.	2	2	
Relig. 121, 122	2	2		Eng. (lit.)	3		
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$		Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	
Health 130,	2			Biol. sci.*		3	
Econ. 111, 112	3	3		Statistics 221	3		
Phys. sci.*	3			Bus. Mgt. 347		3	
Hist. 170		3		Acctg. 201, 211	3	3	
Math. 105		3		Econ. 274 (humanities)		3	
Electives	3	2		Bus. Mgt. 205		2	
Totals Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$		Phys. sci.	3		
				Electives	2		
				Totals Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$	

*Any of the courses listed under the proper headings for general education requirements will be appropriate.

Education

A student having an interest in elementary education should register for the following courses. At the end of his freshman or sophomore year he may transfer to the College of Education without loss of credit and continue his studies toward a Bachelor of Science or Arts degree.

Students having an interest in secondary education should register for the appropriate courses in other areas of provisional registration. For example, a person wishing to teach biological science in the secondary schools should register in courses under biological science, premedicine, predentistry, and preforestry. Or, if a person wishes to teach industrial arts, he should register in the Department of Industrial Education. At the end of his sophomore year he may transfer

to the appropriate college or to the College of Education without loss of credit and continue his studies toward a Bachelor of Science or Arts degree.

Freshman Year			Sophomore Year		
	F	S		F	S
Relig. 121, 122	2	2	Relig.	2	2
Eng. 111, 112	3	3	Music 102	2	
Phys. ed.*	$\frac{1}{2}$	$\frac{1}{2}$	Bact. 121		3
Geol. 101	2		Math. 305		3
Biol. sci. elective		3	Tchr. Ed. 201		2
Chem. 100		2	Phys. ed.*	$\frac{1}{2}$	$\frac{1}{2}$
Hist. 120, 121	3	3	Bot. 101 or Zool. 105	3	
Health 130	2		Geog. 101	3	
Dram. Arts 121		3	Eng. or Amer. lit.	3	
Pol. Sci. 110	3		Hist. 360 or 365 or 366 ..		3
			Minor	3	4
Total Hours	15 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$

*During their freshman and sophomore years students must choose physical education classes from each of the below-listed areas.

Folk and square dance	$\frac{1}{2}$ unit	Group games	$\frac{1}{2}$ unit
Individual game	$\frac{1}{2}$ unit	Physical fitness	$\frac{1}{2}$ unit

Family Living

The two-year program in family living is designed for students who are undecided about a major and who wish to explore possibilities in the College of Family Living. Courses listed below in clothing and textiles, food and nutrition, housing and home management, and child development will provide a foundation in any one of these fields for the bachelor's degree. Other courses listed below will contribute substantially toward filling general education requirements.

Freshman Year			Sophomore Year		
	F	S		F	S
Relig. 121, 122	2	2	Relig.	2	2
Eng. 111, 112	3	3	Chem. 101, 151	4	5
Hous. & Home Mgt.			Zool. 105		3
170A, B	1	1	Food & Nutr. 115	2	
Psych. 111	3		Econ. 101		3
Clo. & Text. 110	2		Hous. & Home Mgt. 250 ..	2	
Art 101 or 110	2		Clo. & Text. 165, 260	4	3
Physics 100	3		Art 101		2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Eng. lit.	2	
Health 130 or Hist. 170....		2-3	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Food & Nutr. 110		2			
H.D.F.R. 210		3	Total Hours	16 $\frac{1}{2}$	18 $\frac{1}{2}$
Bact. 121		3			
Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$ -17 $\frac{1}{2}$			

Fine Arts and Communications

Following is a suggested sequence of courses for students interested in art, music, dramatic arts, speech, journalism, television, radio, advertising, and public relations. At the conclusion of the freshman or sophomore year the stu-

dent should transfer to the College of Fine Arts and Communications and continue his work toward a baccalaureate degree.

Freshman Year			Sophomore Year		
	F	S		F	S
Relig. 121, 122	2	2	Relig.	2	2
Eng. 111, 112	3	3	Foreign lang. or sci.	4	4
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Health 130	2		Psych. 111 or Sociol. 111	3	
Phys. or biol. sci.	3	3	Hist. 170		3
Fine arts electives**	7	8	Fine arts electives**	8	8
Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$

*Any of the courses listed under physical science in the general education requirements will be accepted. Majors in communications should take Physics 177.

**Art 121, 122, and electives from 227, 233, 239, 250, 256, 263; Commun. 101, 211, 212, 255; Speech 101 and 121; Music 101, 102, 105 (or private lessons), 170 (or private lessons or other choral group).

Humanities

It is anticipated that the student who selects the program suggested below will have a general interest in the field of humanities, but will be undecided about a subject in which to major. Completion of this two-year program will fill most of the general education group requirements, will provide training in a foreign language in anticipation of the B.A. degree, and will offer a generous sampling of humanities courses to assist the student in selecting a major. See the College of Humanities and Social Science section of this catalog for the new humanities major program.

Freshman Year			Sophomore Year		
	F	S		F	S
Relig. 121, 122	2	2	Relig.	2	2
Eng. 111, 112	3	3	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Foreign lang.	4	4
Humanities 101	3		Biol. sci. electives**	3	3
Foreign lang.	4	4	Eng. 250	3	
Hist. 170*		3	Soc. sci. electives** ..	2-3	3
Health 130		2	Humanities electives** ..	2-3	5
Phys. sci. electives**	3	3			
Total Hours	15 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	16 $\frac{1}{2}$ -18 $\frac{1}{2}$	17 $\frac{1}{2}$

*Students who anticipate majoring in history, journalism, or political science should take Hist. 120 or Pol. Sci. 110 and Hist. 121 instead of Hist. 170.

**Students should be sure that the courses selected in physical science, biological science, social science, and humanities fill general education credit in these areas.

Nursing

Any student interested in nursing and trying to determine her major should confer with the dean of the College of Nursing or an adviser in that college regarding the program and opportunities. Only the first semester of courses is offered in General College for those interested in a baccalaureate degree in nursing.

Freshman Year			
	F		
Relig. 121	2	Chem. 101 or 151	4
Phys. ed.	$\frac{1}{2}$	Soc. 111	3
Eng. 111	3	Zool. 105	3
		Total Hours	15 $\frac{1}{2}$

Associate Degree

The two-year Associate Degree Program in nursing is outlined under Technical Institute.

Physical Education

Following is a suggested sequence of courses for students interested in recreation, physical and health education, athletics, and youth leadership. When a decision is reached to major in one of these areas the student should transfer immediately to the College of Physical Education and continue his own work toward a baccalaureate degree. He should consult the sections of the catalog dealing with those departments for details for majors in health, physical education, recreation, and youth leadership.

Men

Freshman Year			Sophomore Year		
	F	S		F	S
Phys. Ed. 181, 182	$\frac{1}{2}$	$\frac{1}{2}$	Phys. Ed. 235, 236	2	
Phys. Ed. 201, 233	1	1	Phys. Ed. 370, 371, 372		
Phys. Ed. 231, 234	1	1	373, & 374 (elect 2)		4
Phys. Ed. 232	1		Phys. Ed. 280	1	
Health 121, 130	2	2	Bact. 121	3	
Eng. 111, 112	3	3	Zool. 261, 262	5	
Hist. 170, Zool. 105	3	3	Eng. 250		3
Phys. sci.	2		Soc. sci. & humanities	4	5
Soc. sci. & humanities ..		5	Math. 105		3
Relig. 121, 122	2	2	Relig.	2	2
Total Hours	15 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	17	17

Women

Freshman Year			Sophomore Year		
	F	S		F	S
Relig. 121, 122	2	2	Relig.	2	2
Eng. 111, 112	3	3	Phys. Ed. 244, 245	2	2
Phys. Ed. 241, 242	2	2	Phys. Ed. 181, 182	$\frac{1}{2}$	$\frac{1}{2}$
Phys. Ed. 187, 188, 189 ..	1	$\frac{1}{2}$	Phys. Ed. 180, 160	$\frac{1}{2}$	$\frac{1}{2}$
Phys. sci.*	3	3	Zool. 105, 261;		
Hist. 170	3		Bact. 121		
Health 130		2	or Bot. 101	3	5
Humanities	2	3	Psych. 111	3	
Elective		2	Humanities		3
Total Hours	16	17 $\frac{1}{2}$	Minor subject area	2	
			Health Ed. 362		2
			Eng. lit.	3	
			Phys. ed. electives	1	2
			Total Hours	17	17

*Any of the courses listed under physical science in the general education requirements will be approved.

Physical Science

The following course of study is recommended for one or two years. At the end of either, the student may choose a major, transfer into the College of Physical and Engineering Sciences, and pursue his education to the completion of

a Bachelor of Science degree in chemistry, geology, mathematics, or physics. To avoid loss of time, this transfer should be made as early as possible. Students who are interested in engineering but who have not chosen a specific field should enroll directly in the pre-engineering curriculum outlined under the College of Physical and Engineering Sciences. These students should refer to the program of studies of the department in which they have a particular interest.

Freshman Year

	F	S
Math. 111, 112*	5	5
Chem. 105, 106**	4	4
Eng. 111, 112	3	3
Relig. 121, 122	2	2
Phys. ed. ½	½	½
Health 130	2	2
Electives	3	2
Total Hours	17½	18½

Sophomore Year

	F	S
Math. 213, 334	5	3
Physics 211, 213	4	4
Physics Lab 212, 214	1	1
Relig.	2	2
Phys. ed. ½	½	½
Hist. 170	3	
Electives (biol. and/or humanities)	2	7
Total Hours	17½	17½

*Math. 111 requires a mastery of second-year high school algebra or Math. 101. Students who do not have an adequate background in high school algebra must take Math. 101 before enrolling in either Math. 111 or Math. 105. High school plane geometry is a prerequisite for Math. 111 or Math. 106.

**Chemistry majors should take Chem. 111 or 112.

Social Science

It is anticipated that the student selecting the program suggested below will have a general interest in the social sciences, but will be undecided about a subject in which to major. Completion of this two-year program will fill most of the general education group requirements and should permit a generous enough sampling of social science courses to assist in selecting a major.

Freshman Year

	F	S
Relig. 121, 122	2	2
Eng. 111, 112	3	3
Phys. ed. ½	½	½
Health 130	2	
Soc. 111 or 112	3	
Hist. 170*	3	
Psych. 111		3
Electives in phys. sci.** ..	3	3
Elective in biol. sci.**		2-3
Elective in humanities** ..		2-3
Total Hours	16½	15½-17½

Sophomore Year

	F	S
Relig.	2	2
Phys. ed. ½	½	½
Econ. 101 or 111	3	
Pol. sci.	3	
Geog. 101 or 120		3
Anthrop. 101		3
Eng. lit.	2	2
Electives in foreign lang. or humanities**	4	4
Electives in biol. sci.** ..	3	
Electives in soc. sci.		3
Total Hours	17½	17½

*Students who anticipate majoring in economics, history, journalism, or political science should take Hist. 120 or Pol. Sci. 110 and Hist. 121, instead of Hist. 170.

**Students should be sure that the courses selected in physical science, biological science, social science, and humanities fill general education credit in these areas.

If a student completes one of these curricula, he may transfer into one of the other colleges of the University with a minimum of lost time, credit, or standing, and will advance as a junior in the college of his choice without professional handicap. The same entrance requirements as have been set up for the rest of the University are required for provisional registration.

College of Humanities and Social Sciences

John T. Bernhard, Dean (390 Maeser)

The following departments and special programs are available in the College of Humanities and Social Sciences:

- | | |
|---------------------------|----------------------------|
| Archaeology | Humanities |
| Asian Studies | Languages |
| Economics | Political Science |
| English | Psychology |
| Geography | Russian Studies |
| Hispanic-American Studies | Sociology and Anthropology |
| History | |

Man, himself, has always been a most fascinating study—what he has done, what he has thought, what he has said and how he has reacted to problems confronting him.

The humanities seek to discover, preserve, and disseminate the best of man's thoughts and creations. The social sciences study activities and relationships of man: his nature, his power to communicate, his environment, what motivates him, how his activities progress, the institutions he has created, and the important social and governmental problems with which he must deal. The humanities and the social sciences are therefore related disciplines whose purpose is to help man live in the most intelligent and satisfying manner.

The humanities are the study of what man has created, including his language, literature, art, and the record of his activities as revealed in archaeology and history. The social sciences are younger disciplines utilizing the modern methods of science: controlled observation, laboratory experimentation whenever possible, statistics, and analytical reasoning. Their potential significance for a troubled world is tremendous.

There are two large purposes for which the instructional program of the College of Humanities and Social Sciences is designed. One is the provision of a broad, liberal education to assist those who obtain it to receive in the fullest measure the values to be found in today's complex civilization and to contribute to the enlargement of those values in an effective, acceptable manner. The other is the preparation of a more limited group as qualified contributors to the discovery of additional truth to add to our present heritage and as capable professional participants in the productive affairs of daily living.

Courses intended to contribute to the first purpose are offered as a service to all students in the University. Career programs for those who choose to do their major work in this college are offered in each department. Advisers stand ready to consult with students in the selection of studies that will contribute most effectively to a broad education and to specialized training in each department.

Asian Studies

The Asian Studies Program is an interdepartmental program with the College of Humanities and Social Sciences which provides for two majors or a major and minor combination leading to the B.A. degree.

The program is designed to prepare students for careers and advanced study in the specialized field of the Far East not provided by a major in one department. In the program, students will acquire a working competency in the Chinese or the Japanese language, a broad knowledge of the civilizations of the Far East, and a more specialized knowledge in an academic discipline as applied to Asia. The program is intended for those students desiring to make an intensive study of the cultural history, modern development and problems of Asia. It applies the techniques of and acquaints students with the contributions of anthropologists, linguists, historians, political scientists, economists, sociologists, and geographers. The major as outlined proves useful to students contemplating careers in academic areas, private industry, or government service. The import-export field and international services are particularly interested in persons who have a strong background in Asian studies. Students may enter the program only with the approval of the Committee on Asian Studies and shall register each semester thereafter under its direction.

Requirements for a Major

A total of 28 hours (in addition to a regular major and 12 hours of Chinese, Japanese, or Korean language instruction, equivalent to the bachelor's-degree requirement) divided as follows:

1. Core courses dealing directly with Asia (starred in list below) from each of four fields outside the regular major 14 hours
2. Elective courses dealing more generally with Asia (any in the list below) outside the regular major including for nonlanguage majors eight hours of Asian language study 14 hours

Requirements for a Minor

A total of 14 hours (in addition to a regular major and 12 hours of an Asian language, equivalent to the bachelor's-degree requirement) divided as follows:

1. Core courses 8 hours
2. Elective courses (including three hours of language study) 6 hours

	Hours
Art	
*404. Oriental Art History	2

Anthropology

111. Cultures of the World	3
241. The Growth of Culture in the Old World	3
325. Introduction to Linguistics	2
*414. Peoples of East Asia	2
491. Readings	1-3

Geography

*470. Asia	3
490, 491. Readings	1
*571. Orient	2
585. Geography of Underdeveloped Areas	2

History

*340. Asia	3
*343. Formative Period of Chinese Civilization	3
*344. Modern China	3
*346. Japan	2
*347. India	2
498. Readings	2
*548. Culture of Asia	2

History and Philosophy of Religion

453. World Religions	2
*555. Comparative World Religions (Asian)	2
*556. Comparative World Religions (Asian)	2
*656. Seminar in Asian Religions	2
*559. History of Christianity in Asia	2

Language**Chinese:**

101, 102. First Year Chinese	4 ea.
201, 301. Second Year Chinese	4 ea.
321, 322. Third Year Chinese	3 ea.
453. Modern Chinese Literature	3
490, 491. Individual Study in Chinese	1-3

Japanese:

101, 102. First Year Japanese	4 ea.
201, 301. Second Year Japanese	4 ea.
321, 322. Third Year Japanese	3 ea.
490, 491. Individual Study in Japanese	1-3

Korean:

101, 102. First Year Korean	4 ea.
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Political Science

170. Introduction to International Relations	3
303. Modern Political Thought	3

*352.	Government and Politics of East Asia	3
358.	Government and Politics of Southeast Asia	3
370.	Theory of International Politics	3
375.	International Organization	3
498.	Directed Readings in Political Science	1-2
572.	Soviet Foreign Policy	2
*580.	International Relations of the Far East	3
Sociology		
401.	Racial and Minority Group Relations	2
595, 596.	Directed Readings	1-3 ea.
Economics		
383.	Comparative Economic Systems	3
430.	Economic Development	3
530.	Advanced Economic Development	3
*535.	Economic Problems of Asia	3
693.	Seminar in Comparative Economic Systems	2
English		
251.	Fundamentals of Literature	3
275, 276.	Survey of English Literature	5 ea.
277.	Survey of American Literature	4

Special courses offered from time to time during a summer session such as History 552, Indonesian Civilization; Political Science 308, Political Thought of Asia; and Political Science 353, Governments of China, will satisfy requirements for the major.

Economics

Economics offers a major in the College of Humanities and Social Sciences as well as in the College of Business. The major in the College of Humanities and Social Sciences will be of interest to students who contemplate entering law school, a graduate school of business, or graduate school for advanced degrees in economics. Economics is also excellent training for business or government service.

Requirements for a major:

Economics 111, 112, 274, 311, 312, 453; two of the following: 511, 512, 515; and 12 additional hours in economics.

Statistics 221 and one of the following: a 3-semester-hour course in statistics, Math 112 or Accounting 332.

Math 105

The minor requirement should include no fewer than 14 hours in a department in the College of Humanities and Social Sciences. Minors outside the college must be approved by the department.

Requirements for a minor:

Students selecting economics as a minor subject should include Economics 111, 112 and either 311 or 312 in the required 14 hours.

For additional information and student advisement see the chairman of the Economics Department, 302 Jesse Knight Building.

Hispanic-American Studies

The Hispanic-American Studies Program is an interdepartmental program within the College of Humanities and Social Sciences which provides a major or a combined major and minor leading to the B.A. degree; it does not provide a minor alone. A student cannot have a teaching major in Hispanic-American Studies, but with a few additional hours he may certify in Spanish. The program is designed to meet the professional and cultural goals of persons especially interested in Latin America, whose needs are not served by a major in one department. The Department of Languages offers training in the literature and language of Latin America; the Political Science Department, the governments and political institutions; and so forth. Certain persons who seek employment in business or governmental agencies in Latin America, or who for other reasons

are interested in the area, may best prepare themselves professionally by broad study in the literature, language, culture, geography, politics, and economy of the region. Such persons may enroll in the Hispanic-American Studies Program. While they may not receive the depth in one subject which a conventional major would give them, the greater breadth and the comprehensive understanding of the area itself will compensate for the sacrifice of depth in a single subject.

Requirements for a major:

1. The first two years of college Spanish, or the equivalent, plus Spanish 321 and 322.
2. 4-6 hours (two courses) of specified upper division classes in Hispanic-American or Spanish literature.
3. 4-6 hours (two courses) of specified classes from the "A" lists in each of three of the following subjects: anthropology, archaeology, economics, geography, history, and political science.
4. Spanish 445 is required of all Hispanic-American Studies majors.

Requirements for a combined major and minor:

1. Completion of the above requirements for a major.
2. 4 or more hours (two courses) of specified classes from the "A" list of one of the listed subject-matter fields not included in the major.
3. 6 or more hours in at least three courses from the "B" lists (or not previously chosen from the "A" lists) of the six fields elected for the major and minor; it must be approved by the coordinator.

The coordinator may approve satisfactory equivalents, in consultation with the departments. However, in no case shall the required hours be less than those stated above.

Following are the courses in the program:

Anthropology	Hours
"A" list:	
246. The Growth of Culture in the New World	2
418. Native Peoples of Central and South America	2
Archaeology	
"A" list:	
310. Archaeology and the Scriptures	2
440. Archaeology and Early History of Middle America	3
465. Archaeology of South America	2
"B" list:	
590. Recent Developments in Archaeology	2
Economics	
"A" list:	
358. International Trade and Finance	3
341. Comparative Economic Systems	3
430. Economic Development	3
Geography	
"A" list:	
455. Latin America	3
556. South America	2
557. Caribbean Area	2
History	
"A" list:	
351. History of Latin America I	3
352. History of Latin America II	3
"B" list:	
334. Spain	2
353. Mexico	2
354. Argentina, Brazil and Chile	2

Political Science**"A" list:**

356. Governments of Latin America	2
375. International Organization	3

"B" list:

498. Directed Readings	1-2
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Spanish (culture)

445. Culture of the Hispanic World	3
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Spanish (language)**"A" list:**

101, 102. First Year Spanish	4 ea.
201, 301. Second Year Spanish	4 ea.
321, 322. Spanish Composition and Conversation	3 ea.

(In exceptional cases, approval may be granted to substitute Portuguese 321 and 322 for Spanish 321 and 322.)

Spanish (literature)**"A" list:**

451. Survey of Hispanic-American Literature	3
441. Survey of Spanish Literature	3

(In exceptional cases, approval may be granted to substitute Portuguese 431 or 432 for one of these two courses.)

"B" list:

Available Spanish or Portuguese Courses in 400 or 500 series, to be approved by the coordinator.

Humanities

For capable students in the humanities whose educational objectives are not met by a conventional major in one department and a minor in another, the college offers an interdepartmental major and minor, 50 semester hours in art, history, literature (including foreign literature), and music. Students are advised to support these subjects with courses in philosophy, the social sciences, and other related areas. Students will also complete a foreign language program sufficient for the B.A. degree. Of the 50 semester hours required in art, history, literature, and music, at least 25 must be upper division work.

The educational and vocational goals of most students are best served by a conventional major and minor. A selected few students, however, will profit from broader training which includes intensive work in several of the humanities subjects. Such a program has broad cultural value. Through it students may acquaint themselves with the relationships among the various humanities subjects and obtain a valuable liberal education consisting of substantial, well-balanced work in the broad field of the humanities.

Students may enter the humanities program only with permission of the coordinator and should register each semester thereafter under his direction.

1. Required Courses for the Major in Humanities:**Hours**

a. Humanities 101. (To be taken in the freshman or sophomore year) .. 3

b. Art—at least 8 semester hours selected from the following (courses preceded by an asterisk are especially recommended):

*Art 101. Introduction to Art	2
*Art 108. General Art	2
Art 110. Design in Everyday Life	2
*Art 121. Introduction to Drawing	3
Art 122. Basic Figure Drawing	3
*Art 306. Art History and Appreciation	3
*Art 307. Contemporary Art	2
Art 308. American Art	2
Art 403. Ancient and Primitive Art	2
Art 404. Oriental Art	2
Art 405. Medieval and Renaissance Art	3

Art 501. Aesthetics 2

Note: Humanities majors are also encouraged to take one or two of the following courses: Art 227, 233, 239, 250, 256, 263.

- c. English—at least 14 semester hours selected from the following courses: English, American, and comparative literature (courses preceded by an asterisk are especially recommended):

*English 251 or 250. Fundamentals of, or Introduction to, Literature	3
English 252. Introduction to Poetry	2
English 253. Introduction to Drama	2
English 260. Masterpieces of American Literature	3
English 270. Masterpieces of English Literature	3
English 275, 276. Survey of English Literature	5 ea.
English 277. Survey of American Literature	4
*English 282 or 382 or 582. Shakespeare	2 or 3
English 332, 333. The English Novel	3 ea.
English 335, 336. The American Novel	2 ea.
English 338. The European Novel	3
English 341, 342, 343. English and American Drama	2 ea.
English 355, 356. World Classics	3 ea.
English 359. The Short Story	2
*English 361, 362. American Literature	4 ea.
English 366. Modern Poetry	2
*English 371, 372, 373, 374, 375. English Literature	3 or 4
English 380. Twentieth Century Literature	5
English 381. Chaucer	3
English 450. The Criticism and Appreciation of Literature	3
English 500-509. Eminent American Writers	1
English 510-519. Eminent English Writers	1 or 2
English 572. European Literature of the Renaissance	3
English 573. European Literature of the 17th and 18th centuries ..	3
English 574. European Literature of the Romantic Age	3
English 575. European Literature Since 1850	3

- d. History—at least 10 semester hours selected from the following:

History 110, 111. World Civilization	3 ea.
History 304. Greek History and Civilization	3
History 307. Roman History and Civilization	3
History 312. The Renaissance: Age of Transition	2
History 313. The Reformation: Age of Turmoil	2
History 373. American Intellectual and Cultural Growth	2
History 512. Medieval Thought and Culture	2
History 528. Modern European Thought and Culture	2
History 548. Culture of Asia	2

- e. Languages—at least 6 semester hours selected from the following:

French 441, 442. Survey of French Literature and Culture I	3 ea.
French 443, 444. Survey of French Literature and Culture, II	3 ea.
French 445. Introduction to French Civilization	2
German 441. German Literature from the Beginning to 1700.	3
German 442. German Literature in the 18th Century	3
German 443. German Literature in the 19th Century	3
German 444. German Literature in the 20th Century	3
German 445. Cultural History of Germany	3
German 431, 432. Masterpieces of German Literature	3 ea.
German 441, 442. Survey of German Literature and Culture	3 ea.
Italian 431, 432. Masterpieces of Italian Literature	3 ea.
Latin 431, 432. Masterpieces of Latin Literature	3 ea.
Portuguese 431, 432. Masterpieces of Brazilian and Portuguese Literature	3 ea.
Russian 441, 442. Survey of Russian Literature to 1900	3 ea.

Russian 443, 444. Survey of Russian Literature to the Twentieth Century	3 ea.
Russian 445. Cultural History of Russia	3
Spanish 441. Survey of Spanish Literature	3
Spanish 445. The Culture of the Hispanic World	3
Spanish 451. Survey of Hispanic-American Literature	3

f. Music—at least 8 semester hours selected from the following:

Music 101. Introduction to Music	3
Music 103. Survey of Music Literature	2
Music 484, 485. History of Music	3 ea.

Note: Humanities majors also are encouraged to take one or two of the many participation courses offered by the Music Department.

2. Recommended Courses in General Education for the Major in Humanities:

a. At least 7 semester hours selected from the following:

Religion 453. World Religions	2
Religion 555, 556. Comparative World Religions	2 ea.
Philosophy 380. Survey of Philosophy	2
Philosophy 470. History of Ancient Philosophy	3
Philosophy 471. History of Modern Philosophy	3
Philosophy 472. Contemporary Ethics	2
Philosophy 475. Contemporary Anglo-American Philosophy	2
Philosophy 447. Scholasticism, Humanism, and Mysticism	2
Philosophy 483. Problems of Knowledge	2

b. Courses selected as desired from the following:

Anthropology 101. Introductory Anthropology (G-SS)	3
Anthropology 111. Cultures of the World (G-SS)	3
Anthropology 246. The Growth of Culture in the New World	2
Archaeology 200. Introduction to Archaeology (G)	3
Archaeology 380. Old World Archaeology (G-HA)	3
Economics 274. Economic and Financial History of the United States (G-HA)	3
Economics 341. Comparative Economic Systems (G-SS)	3
English 350. The Bible as Literature (G-HA)	2
Geography 120. Geography in World Affairs (G-SS)	3
Geology 101. Introduction to Geology (G-PS)	2
Geology 103. Life of the Past (G-PS)	3
Library Science 585. History of Books and Libraries	3
Psychology 350. Introduction to Social Psychology (G-SS)	3

3. Recommended Courses Not in General Education for the Major in Humanities:

Anthropology 241. The Growth of Culture in the Old World	3
Economics 515. History of Economic Thought	3
Political Science 301. The Development of Political Thought	3
Psychology 450. Personality Development	3
Psychology 540. Abnormal Psychology	3
Sociology 405. Sociological Principles	3

International Relations

The International Relations Program is an interdisciplinary program within the College of Humanities and Social Sciences which provides two majors or a major and a minor combination leading to the B.A. degree.

The program is designed to prepare the student for a career or for advanced study in international relations. In the program, students will be required to complete a major in one of the regular disciplines, to acquire a basic knowledge in a modern language, and to develop an integrated understanding of international relations. To enable the student to compete more effectively for a career in the foreign service, both public and private, the student will be introduced

to the study of intercultural relations and international politics in fields such as anthropology, psychology, sociology, geography, history, economics, and political science. This broad interdisciplinary training also is designed to prepare the student for advanced study in international relations. Students may enter the program only with permission of the coordinator and should register each semester thereafter under his direction.

Requirements for a Major:

A total of 28 hours (in addition to a major in one of the departments and 12 hours of modern language) divided as follows:

- | | |
|--|----|
| 1. Theory of International Politics | 3 |
| 2. Core courses chosen from three fields outside the regular major (starred list below) including two of the following: International Trade and Finance, International Organization, and International Law | 15 |
| 3. Elective Courses (including 4 additional hours of language for non-language major and minor) chosen from any of the fields listed below | 10 |

Requirements for a Minor:

A total of 14 hours (in addition to a major in one of the departments and 12 hours of modern language) divided as follows:

- | | |
|--|--------------|
| | Hours |
| 1. Theory of International Politics | 3 |
| 2. Core courses chosen from two fields outside the regular major (starred list below) including one of the following: International Trade and Finance, International Organization, International Law | 6 |
| 3. Elective courses chosen from any of the fields listed below | 5 |

FIELDS

	Hours
Air Science	
101 Foundations of Aerospace Power	2
201 Fundamentals of Aerospace Power Weapons	2
Anthropology	
101 Introductory Anthropology	3
111 Cultures of the World	3
241 The Growth of Culture in the Old World	3
432 Political and Legal Systems	3
*471 The American Culture	3
491 Readings	TBA
Economics	
101 Survey of Economics	3
111 Introduction to Economic Principles and Problems	3
112 Introduction to Economic Principles and Problems	3
*341 Comparative Economic Systems	3
*358 International Trade and Finance	3
430 Economic Development	3
530 Advanced Economic Development	3
535 Economic Problems of Asia	3
558 International Trade and Finance	3
590 Advanced Economic Problems	TBA
English	
250 Introduction to Literature	3
270 Masterpieces of English Literature	3
355 World Classics	3
358 World Classics	3
380 Twentieth Century Literature	5
426 Semantics	2
495 Individual Readings	TBA
Geography	
101 Introduction to Geography	3

120 Geography and World Affairs	3
231 Economic Geography	3
305 Physiography of North America	2
332 World Mineral Resources	2
351 North America	3
401 Geography of Climates	2
*411 Political Geography	3
522 Urban Geography	2
580 Geography of Underdeveloped Areas	2
Advanced regional courses in 400 and 500 series	6
History	
*323 Europe in the 20th Century	3
331 Russia Since 1900	3
340 Asia	3
352 Modern Latin America	3
*379 U.S. in the 20th Century	3
498 Directed Readings	TBA
525 European Diplomatic History	3
548 Culture of Asia	2
History and Philosophy of Religion	
380 Introduction to Philosophy	2
453 World Religions	2
555 Comparative World Religions	2
556 Comparative World Religions	2
Communications	
101 Introduction to Mass Communication	2
307 Communication Law	2
490 Practices and Problems in Mass Communication	2
*580 World Communication Channel	2
Languages	
Advanced courses in a modern language beyond the 12-hour bachelor requirement	10
Political Science	
150 Foreign Governments	3
170 Introduction to International Relations	3
303 Recent Political Thought	3
350 Government and Politics of Soviet Union and Eastern Europe	3
*351 Communist Governments and Politics	3
352 Government and Politics of East Asia	3
355 Governments and Politics of the United Kingdom and the Commonwealth	3
356 Government and Politics of Latin America	3
358 Government and Politics of Southeast Asia	3
*365 International Organization	3
370 Theory of International Politics	3
375 International Organization	3
510 International Project Administration	3
*571 Development of American Foreign Policy	3
572 Soviet Foreign Policy	3
*575 International Law	5
580 International Relations of Asia	3
Psychology	
111 General Psychology	3
*350 Social Psychology	3
357 Group Relations and Leadership	3
478 Individual Differences	2
495 Independent Readings	TBA
552 Personality: Culture and Society	3
555 Group Dynamics	2

Sociology

111	Introductory Sociology	3
*350	Social Psychology	3
357	Group Relations and Leadership	3
410	Racial and Minority Group Relations	2
420	Population Problems	3
423	Rural Sociology	2
426	The Sociology of Urban Life	3
449	Community Organization, Action and Planning	2
470	Social Change	3
552	Personality: Culture and Society	3
555	Group Dynamics	2
570	Class, Status, and Power	2
595	Directed Readings	TBA

Russian Studies

The Russian Studies Program is an interdisciplinary area program in the College of Humanities and Social Sciences which provides two majors or a major and minor combination leading to the B.A. degree.

The program is designed to prepare students for careers and advanced study requiring a broad understanding of Russia and of the Soviet Union. Students in Russian studies combine the depth of a major in economics, geography, history, political science, or Russian language and literature, with the breadth of integrated study concerning Soviet Russia provided by several disciplines. Majors in other than the above disciplines also may take the Russian studies major concurrently. Russian area specialists who also have a regular professional or academic skill find opportunities for employment by United States domestic and foreign government agencies, by international organizations, and by private business firms dealing with the USSR. For those students going immediately into graduate study and teaching, the breadth in Russian area study combined with a regular major will prove equally advantageous. Students may enter the program only with the permission of the coordinator and should register each semester thereafter under his direction.

Requirements for a Major:

A total of 28 hours (in addition to a regular major and 12 hours of basic Russian language instruction equivalent to the bachelor's-degree requirement) divided as follows:

1. Core courses on Russian and Soviet economics, geography, history, government and politics, foreign relations, and literature (starred in list below) from each of four fields outside the regular major 14 hours
2. Other courses dealing more generally with Russia and the Soviet Union (any in the list below) outside the regular major including for non-language majors eight hours of intermediate Russian language study. 14 hours

Requirements for a Minor:

A total of 14 hours (in addition to a regular major and 12 hours of basic Russian language instruction equivalent to the bachelor's degree requirement) divided as follows:

1. Core courses on Russian and Soviet economics, geography, history, government and politics, foreign policy, and literature (starred in list below) from each of the fields outside the regular major 8 hours
2. Other courses dealing more generally with Russia and the Soviet Union (any in the list below) outside the regular major including for nonlanguage majors three hours of intermediate Russian language study 6 hours

Economics**Hours**

111	Economic Principles and Problems	3
112	Economic Principles and Problems	3
345	Intermediate Economic Analysis	3

346	Intermediate Economic Analysis	3
*430	Economic Development	3
590	Advanced Economic Problems	1-2
Geography		
101	Introduction to Geography	3
or		
120	Geography and World Affairs	3
441	Political Geography	3
*562	USSR and Its Satellites	2
490	Directed Readings	TBA
History		
111	World Civilization II	3
*330	Russia Before 1900	2
*331	Russia Since 1900	2
498	Directed Readings	TBA
Political Science		
150	Foreign Governments	3
170	Introduction to International Relations	3
*350	Government and Politics of the USSR and Eastern Europe	3
351	Communist Governments and Politics	3
*572	Soviet Foreign Policy	2
498	Directed Readings	TBA
Russian Language and Literature		
101	Beginning Russian	5
102	Beginning Russian	5
201	Intermediate Russian	5
301	Selected Readings in Russian	3
321	Russian Composition	3
*441	Russian Literature and Culture in 19th Century	3
*442	Russian Literature and Culture in 19th Century	3
*443	Russian Literature and Culture in 20th Century	3
*444	Russian Literature and Culture in 20th Century	3

College of Nursing

BACCALAUREATE DEGREE

B. Ream Allen, Dean (2240 SFLC)

The basic baccalaureate program in nursing is organized to provide a balance of general and professional education. General education courses are given in the first semester. Beginning in the second semester, courses in professional nursing are correlated with general education. Concepts of communications, mental health, pharmacology, nutrition, professional ethics, health teaching, interpersonal relationships, and spiritual values are integrated throughout the program. The course of instruction covers laboratory experience with theory courses given concurrently.

The College of Nursing baccalaureate program is accredited by the National League for Nursing Accrediting Service and is approved by the Representative, Committee for the Practice of Nursing in Utah. At the completion of the program the student receives a Bachelor of Science degree and is eligible to take the state examinations for licensure to practice nursing as a registered nurse and to use the title R.N. She also is eligible for public health nursing certification.

Philosophy. Within the framework of the philosophy of Brigham Young University, the College of Nursing faculty believes it should assist students to acquire competence, assume responsibility in professional nursing, and further develop spiritual values and a sense of social and civic responsibility. The faculty believes that learning involves not only the gaining of knowledge but the acquisition of wisdom and judgment in applying it. Each student, being

a unique individual of dignity and worth, should have opportunities for continuing personal and professional growth.

- Purposes.** 1. To prepare professional nurses for leadership positions in the clinical areas of nursing and to function effectively in giving skillful, comprehensive patient care and contributing to the prevention of illness, rehabilitation, and promotion of health.
2. To develop a strong sense of professional responsibility in the student for maintaining and furthering the quality of nursing as it relates to the individual and community.
 3. To develop social sensitivity and broad cultural interests which will enable the student to enjoy a more satisfying and useful personal, family, and community life.

- Objectives.** 1. Ability to function effectively and find satisfaction as a professional nurse and as a citizen in the community.
2. Understanding of concepts from the humanities, physical, biological, and social sciences, and their implications for professional nursing.
 3. Continuous development in understanding and utilizing problem-solving methods.
 4. Progressive ability to understand and use communication skills effectively.
 5. Increased understanding of behavioral dynamics and development of more effective interpersonal relationships.
 6. Acceptance of responsibility for self-direction, leadership, and continuation of personal and professional growth.

Requirements

Admission. All applicants must meet University admission requirements. High school students are advised to take at least one unit of algebra (a unit of geometry is desirable), chemistry, biology, physics, a foreign language, and three, preferably four, units of English.

A student should register in General College for the first semester in the prescribed courses for baccalaureate students of nursing. The student will be assigned to a College of Nursing faculty member who will act as her adviser. An interview with an adviser, completion of special forms, and a nursing aptitude test are required during the first semester.

In order to enroll in nursing, the student must transfer to the College of Nursing for the second semester.

Progression. Continuance in the College of Nursing will be determined by the health records, adaptability to nursing as evidenced by attitudes and skills, and University grades.

An average grade of "C" (2.00) must be maintained each semester to remain in the College of Nursing.

Honors Program. A faculty member represents the College of Nursing on the University Honors Program Committee. There is a special section which provides special opportunities and direction for superior students in the beginning level nursing courses.

Graduation. Candidates for a degree must fulfill the University requirements for graduation. It will be the student's responsibility to meet these requirements. The program provides for a combined major and minor in nursing.

Advisement

The University provides counseling services for all students with educational, vocational, and other personal problems. Assistance in program planning during the time the student is determining her major interest is available through the College of Nursing office. Each student in the College of Nursing has a faculty adviser who will help in the selection of courses and planning of a schedule.

The adviser will check the student's academic progress, explain sequence of nursing courses, and help her use the resources of the University to the greatest advantage.

Transfers. For information on transfers from another college within the University, or admission to the College of Nursing from another institution, the student should contact the dean of the College of Nursing, who will present the case to the Admissions and Standings Committee for recommendations.

Fees and Scholarships

Total educational costs are the responsibility of the student. These are found in the catalog section titled "University Fees" listing general University expenses. To these the student should add the cost of uniforms. Laboratory fees in the nursing courses average approximately \$18 to \$20 for the four years. An itemized estimate of the costs to a student in the College of Nursing is available upon request.

The University policy concerning scholarships for leadership and academic standing is applicable to all students in the College of Nursing. After the freshman year some special scholarships and educational assistance are available for nursing students with demonstrated ability and financial need.

College Organizations

In addition to the regular college organizations the Brigham Young University Student Nurses' Association is affiliated with the Utah and American Student Nurses' Association, a professional organization for students in the College of Nursing. Membership is extended to all students enrolled in nursing. The goals of the organization are to promote professional, social, cultural, and educational activities; to foster cooperation and good fellowship; and to maintain the scholastic and moral standards of the University. Regular meetings are held each month alternating between Provo and Salt Lake City. Representatives of the local association attend the state association meetings and the national meetings. Association members have opportunities to develop leadership abilities, acquire professional attitudes and knowledge, and gain friends through working together.

Educational Facilities

Students share the same facilities and have the same cultural opportunities as all other students on the campus. The newest, most effective teaching aids and equipment are provided in the College of Nursing laboratories and classrooms. The facilities utilized for nursing experience change from year to year depending upon the needs of the students and the learning experiences selected by the faculty. At present, clinical experience is provided in the Latter-day Saints' Hospital in Salt Lake City, the Primary Children's Hospital in Salt Lake City, Utah Valley Hospital of the Church of Jesus Christ of Latter-day Saints in Provo, Utah State Hospital in Provo, Utah, City-County Health Department in Provo, the B.Y.U. Student Health Center, and other civil agencies. These Church-operated hospitals are approved by the Joint Commission for the Accreditation of Hospitals, an organization sponsored by the American Hospital Association, American College of Surgeons, American Medical Association, and American College of Physicians.

The Latter-day Saints' Hospital in Salt Lake City, with a capacity of 441 adult beds and 105 bassinets, provides clinical fields for the practice of medical, surgical, operating room, obstetrics, and pediatric nursing. The Primary Children's Hospital in Salt Lake City, with a bed capacity of 96, including an isolation unit, provides experience in the care of the child.

The Utah Valley Hospital of the Church of Jesus Christ of Latter-day Saints has a current capacity of 237 beds and 36 bassinets. It provides clinical fields for the practice of medical, surgical, operating room, obstetrics, and pediatric nursing. The Utah State Hospital in Provo, with a bed capacity of 835 and an average daily census of 575, provides experience in psychiatric nursing. The Utah City-County Health Department provides a generalized public health nursing program and offers field experience in nursing.

Associate Degree

Lottie Felkner, Director (L.D.S. Hospital, Salt Lake City, Utah)

The Associate Degree Program in nursing is designed to prepare excellent bedside nurses who are qualified to take the State Board Examination and become registered nurses.

Nursing encompasses a complex of functions which requires the services of competent practitioners with varying levels of preparation. Each of these levels represents a career in nursing and the opportunity for nurses to achieve excellence within the framework of their preparation.

Objectives. The Associate Degree Program will assist its graduates to

1. Grow in self-understanding and strive for perfection in their personal lives, as citizens in the community, and in their nursing careers.
2. Return to their communities and find satisfaction in achieving excellence as members of the nursing team.
3. Know the basic principles of nursing and utilize them effectively in giving direct nursing care, in staff nursing positions and in hospitals and similar institutions.
4. Communicate and relate effectively with others.
5. Think and reason more critically, and achieve basic skills in problem solving.
6. Welcome supervision and seek guidance appropriate with their level of preparation.
7. Recognize that the Associate Degree Program does not provide preparation and experiences essential for leadership positions in nursing such as head nurse or supervisor.
8. Become eligible to take the State Board Test Pool Examination for licensure as a registered nurse.

Program Description

Six semesters are required to complete the associate degree program. The first two semesters (fall and spring) are spent at Brigham Young University filling general education requirements to provide the foundation essential to nursing. As members of the University studentbody, students in nursing enjoy the same privileges and opportunities as do other students; they share in the rich social, cultural, recreational, and spiritual activities that are an important part of University life.

Starting in the summer (third semester), students go to the L.D.S. Hospital, where they remain until the completion of the program. Here, they participate in the nursing science courses and in clinical practice, and continue general education courses.

The Latter-day Saints' Hospital with 441 beds for adults 105 bassinets, and the Primary Children's Hospital with a bed capacity of 96, including an isolation ward, provide excellent experiences in medical-surgical, pediatric, psychiatric, and maternity nursing.

Requirements

Admission. Admission requirements are the same as for the baccalaureate degree program except that the student will remain in General College for two semesters. The third semester (summer) the student will transfer into the College of Nursing.

Progression. Continuance in the Associate Degree Program is determined by health records and adaptability to nursing as evidenced by attitudes and skills, and grades.

A student may continue in the University but will not be permitted to start the beginning nursing courses in the summer term (third semester) unless she has a cumulative grade-point average of 2.00.

A minimum average grade of "C" (2.00) should be maintained in each clinical area to remain in the program.

Graduation. The Associate Degree in Nursing is conferred on candidates who fulfill University requirements for graduation. Graduates are eligible to take the State Board Test Pool Examination for licensure as registered nurses (R.N.).

Counseling. See "Advisement" at beginning of the College of Nursing section.

Fees and Scholarships. See "University Fees" section of this catalog.

Transfers. See "Student Academic Services" and "College of Nursing" sections of this catalog.

College of Physical and Engineering Sciences

Armin J. Hill, Dean (294 ESC)

The College is divided into nine departments:

- Air Science
- Chemical Engineering Science
- Chemistry
- Civil Engineering Science
- Electrical Engineering Science
- Geology and Geological Engineering Science
- Mathematics
- Mechanical Engineering Science
- Physics

The Department of Air Science (AFROTC) is under the direct supervision of regular officers of the United States Air Force. A description of the requirements and activities of this department is given in the section on air science (AFROTC) under List of Courses.

Required High School Preparation

A student enrolling in the College of Physical and Engineering Sciences will find it necessary, in order to complete the prescribed curricula without loss of time, to have successfully completed the following high school courses or their equivalents:

3 units of English.

3 units of mathematics which must include one unit of plane geometry and one and one-half units of algebra, with additional course work in algebra, trigonometry, or solid geometry strongly recommended.

1 unit of physical science which should be either chemistry or physics, also strongly recommended.

Because mathematics provides the foundation for all work in the physical and engineering sciences, each entering freshman who intends to enroll in this college will be given a placement test which will include a test of his preparation and ability in mathematics. If his high school training is found deficient, he will be required to take remedial work. On the other hand, if this test shows unusual proficiency he may be excused from taking some of the more elementary college mathematics.

Deficiencies in high school preparation may be made up by enrolling in special courses which are offered for this purpose. If a student feels he has sufficient understanding of required subject matter to carry his regular college courses satisfactorily, he may elect to take a special examination which, if passed successfully, will excuse him from these remedial requirements. He should recognize that the time required to complete his college program will probably be extended by the length of time necessary to make up these deficiencies.

A student who will not have completed all recommended courses by the time he graduates from high school may complete them through Home Study courses or other courses offered by the Brigham Young University Extension Services. A high school senior who has the time and ability to carry extra courses may take extension courses which will receive college credit and count toward his baccalaureate degree. Information on any of these courses will be sent upon request.

Physical Sciences

The Departments of Chemistry, Geology, Mathematics, and Physics each offer four-year courses leading to the degree of Bachelor of Arts or Bachelor of Science. Candidates for graduation in these departments must meet the general University requirements for such degrees and must also meet the special requirements outlined in each department.

Engineering Sciences

The engineering curricula at Brigham Young University have been established as three-year professional programs preceded by a preprofessional curriculum which will normally require two years of study. An exceptionally qualified high school graduate will be able to complete his work for a bachelor's degree in less than five years. However, experience over the country has shown that a majority of engineering students require more than four years to complete requirements for their first degree. By deliberately planning the somewhat longer program, it has been possible to include additional mathematics and science as a foundation for the engineering subjects. The professional courses therefore can be taught on a higher technical level than otherwise would be possible. The success of this arrangement is attested by ready acceptance of the graduating students by industry and also by the leading graduate schools of the nation.

Courses leading to the degree of Bachelor of Engineering Science are offered in the Departments of Chemical Engineering Science, Civil Engineering Science, Electrical Engineering Science, and Mechanical Engineering Science. These curricula have all been accredited by the Engineering Council for Professional Development (ECPD). A course leading to the degree of Bachelor of Engineering Science also is offered in the Department of Geology and Geological Engineering Science.

The preprofessional program required of all engineering students should be in accordance with the following outline.

Preprofessional Curriculum in Engineering Science

First Year		Second Year	
	F	S	
*Chem. 105, 106	4	4	Physics 211, 213 4
Math. 111, 112	5	5	Physics Lab 212, 214 1
Eng. 111, 112	3	3	Math. 213, 334 5
**Civ. Eng. 101, 102	2	2	#Statistics 321 3
Relig. 121, 122	2	2	Relig. 2
Mech. Eng. 100	1		***Civ. Eng. 203, 301 2
Health 130		2	†Group electives 3
Phys. ed. ½	½		Phys. ed. ½
Total Hours17½			Total Hours17½
			18½

*Chemical engineering majors should take Chem. 111, 112 (5 ea.).

**Electrical engineering majors replace Civ. Eng. 102 with a group elective. Chem. eng. majors take Civ. Eng. 101 or 102 the second year, and have a 2-hour elective the first year.

#Chemical engineering majors do not take Statistics 321 this year.

***Chemical engineering majors take Chem. 351, 352 (4) instead of Civ. Eng. 203, 301. Chem. Eng. 272 is taken Spring Semester and a 2-hour elective Fall Semester.

†Civil engineering majors should take Civ. Eng. 211, 212 in place of the group electives.

The programs for the subsequent professional curricula are given in the departmental sections of the catalog. The high school graduate of superior ability who has completed the equivalent of college algebra and trigonometry and who can demonstrate his ability by successfully passing examinations in these subjects may enroll directly in Math. 112. The student with adequate preparation in drafting likewise may be excused from the first course in graphics, Civ. Eng. 101. Additional time may be saved if the student has had such preparation that he can be excused from some of the required English, history, and health education courses.

If a student has adequately met all of the requirements of the preprofessional program, as these are somewhat modified for each department, and if he has received an average grade of "C" or better in his work in chemistry, in mathematics, and in physics, he automatically will qualify for admission to the professional program. Under certain circumstances some departments may require in addition that the student pass a special qualifying examination before he actually is admitted.

A transfer student will be admitted into the professional curriculum provided he shows that he has successfully completed an acceptable equivalent of all the courses in chemistry, physics, mathematics, English, and engineering as outlined in the preprofessional curriculum on the preceding page. Acceptability will be determined by the department in which the student expects to major. He therefore should contact that department well in advance of his coming to this university to make sure that he will have completed essential work. It may be possible to make up deficiencies by special home study or in summer school. It is to the student's advantage that such deficiencies be cleared before entering the work of the professional program.

If either a resident or a transfer student fails to meet the minimum requirements set by his department for admission into the professional curriculum, he may petition for admission on a probationary status, in which case his work for the ensuing year will be subject to continual review. If it is not satisfactory, the student will not be permitted to continue his work in that department.

No student will be permitted to register in any of the engineering science departments for more than one term during which he is not pursuing the regular outlined curriculum of that department or an approved modification thereof.

The majors offered in these departments leading to a four-year degree are in chemistry, chemistry teaching, pre dental chemistry, premedical chemistry, geology, mathematics, and physics. In addition to these, a major in mathematical statistics is offered in this college through cooperation of the Departments of Mathematics and Statistics.

Graduate Courses

Instruction leading to a Master of Science degree is offered in chemical engineering, chemistry, civil engineering, electrical engineering, geology, mathematics, mechanical engineering, and physics. Instruction leading to the degree of Doctor of Philosophy is offered in chemistry, geology, and physics.

Each graduate student must fill all of the requirements for advanced degrees as outlined by the Graduate School. The responsibility of knowing and fulfilling these requirements rests with the student.

College of Physical Education

Milton F. Hartvigsen, Dean (213 SFH)

The following departments are in the College of Physical Education:

- Health and Safety Education
- Intercollegiate Athletics
- Physical Education—Men
- Physical Education—Women
- Recreation
- Youth Leadership

The following additional areas are given special attention:

- Dance
- Intramural sports
- Prephysical therapy

This college, unique in American universities, has two significant contributions to make: service and development of leadership.

Outstanding in its services are those functions which contribute to student life. The physical education program provides vigorous participation in specific physical activities which are part of the cultural heritage of American youth. It is intended that individual team and winter sports, various types of rhythms and dancing, gymnastics and tumbling, aquatics, special body-building activities,

and other activities provide opportunity for development, expression, and normal participation.

Those students with specialized skills in athletics are encouraged by well-coordinated programs in intramurals and in intercollegiate athletics. Through affiliation with the Western Athletic Conference and the National Collegiate Athletic Association there are opportunities in intercollegiate athletics for competition in baseball, basketball, football, golf, gymnastics, tennis, track, and wrestling. Varsity squads make scheduled trips into selected areas meeting teams of other universities.

While opportunities for leadership by educated men and women are always unlimited, the demand is particularly high for those whose professional areas lie within this college. Professional training is emphasized in these major fields: recreation, youth leadership, physical education, and health and safety education. Certification for teaching in Utah may be completed, and certification for teaching in other states may be arranged readily. Dance and prephysical therapy are given attention as areas in which students may specialize.

Brigham Young University is the first university to offer a major in youth leadership. The program is two-fold: the training of men for professional scouting and the preparation of men and women to serve the Church and community in youth leadership capacities.

Brigham Young University alumni have gone to all points of the globe and have actively guided communities and Church members to the ends of abundant and wholesome living. The Church of Jesus Christ of Latter-day Saints, through its beliefs and teachings, has developed a real heritage in health practices and in family, Church, and community recreation. Brigham Young University, in harmony with the objectives of the Church, plans not only for participation by its members, but for active and exemplary leadership by them. It is a goal of this college to help achieve this.

Department of Health and Safety Education. In the Department of Health and Safety Education emphasis is placed on the educational aspects of health, including safety and driver education, as well as the health sciences. This department functions in the promotion of proper health knowledge, attitudes, and practices. It also cooperates with the home, the University and the health center; with physicians and dentists; and with public health departments and other groups which have responsibilities in the promotion of health. The health curriculum deals primarily with health instruction. Stress is placed on personal health, sanitation, nutrition, and personal safety practices. Courses are offered for all students and for teachers working toward certification in public schools.

Department of Intercollegiate Athletics. Brigham Young University is a member of the Western Athletic Conference and the National Collegiate Athletic Association. The school competes in all sports sponsored by the conference.

The athletic program at Brigham Young University serves as a vital educational training ground and laboratory dedicated to teaching young men important individual traits which will better enable them to perpetuate the American tradition. The program is designed to develop such characteristics as capacity to lead and direct, respect for discipline and authority, social and moral understanding, ability to act effectively under stress, capacity for self-discipline in the interest of accomplishment, and determination to overcome obstacles. Individual and team play promotes cooperation, sportsmanship, health, strength, and bodily vigor in the participants.

Departments of Physical Education. These departments, one for men and one for women, work together in providing (1) service courses, (2) professional education for prospective teachers of physical education and athletic coaching on the undergraduate and graduate levels, and (3) special curricula in dance and prephysical therapy.

Physical education is planned to develop organic power, physical fitness, skill in activities, and enthusiasm for useful and desirable pursuits during leisure time throughout life. Its program is also planned to develop social habits and attitudes which will prepare students for leadership roles in college, Church, family, and community life. Many courses are offered on a coeducational basis.

Department of Recreation. This department has a number of basic functions in fulfilling its responsibility to the students, the University, the Church, and the profession. Among the responsibilities specifically recognized are (1) to prepare professional recreation leaders, (2) to qualify voluntary leaders for Church and community service, (3) to provide and supervise recreational activities for students and faculty, and (4) to provide consultation service for campus, community, and state groups. To meet these responsibilities this department has developed an expanded curriculum and secured many new facilities; others are being planned for the immediate future; and a highly trained staff has been assembled to conduct the program.

The general purpose of the expanding intramural program is to afford all students the opportunity to take part in a well-organized program which includes a wide range of activities. An extensive program for both men and women is provided.

Department of Youth Leadership. The Department of Youth Leadership offers a relatively new field of career preparation for the college student. Extensive professional opportunities are now available to the graduate who has been trained to administer the many national and local youth organizations that require professional leadership.

The student may select a curriculum particularly suited to prepare him for executive leadership within the Boy Scouts of America, or he may choose a broader field of preparation that will qualify him for employment by boys'-club organizations, youth associations, achievement programs, and other such groups. Youth associations for girls, Girl Scouts, and Campfire Girls, demand professionally-trained women to administer their programs. A major or minor in youth leadership provides a graduate with excellent employment opportunities.

A second objective of the department and one of far-reaching purpose is to provide graduates, regardless of their professional interest, with abilities for skilled volunteer leadership of youth so desperately needed by church and community organizations.

College of Religious Instruction

B. West Belnap, Dean (216 S)

The following departments are in the College of Religious Instruction:

Undergraduate Studies in Religious Instruction

Graduate Studies in Religious Instruction

This college administers all religious instruction sponsored by the University.

It always has been the view of the Church of Jesus Christ of Latter-day Saints that in the training of its youth there should be a proper integration of moral and religious knowledge and values with secular knowledge. From its inception, Brigham Young University, firm in the belief that no life is full and complete unless established upon a sound ethical and religious basis, has offered courses in religion.

Many courses in the College of Religious Instruction are available to the undergraduate student, although no bachelor's degree is offered by this college. The basic philosophy underlying the educational process at Brigham Young University is that an undergraduate student study religion simultaneously with his study of the other academic disciplines. Therefore, except under extenuating circumstances, a student will take a course in religion each semester he is in residence rather than accumulating excessive religion credit in one semester in order to be excused from religion in another semester.

For general education requirements in religion, see the Student Academic Services section of this catalog.

Graduate Studies in Religion

The Graduate Department of Religious Instruction offers six graduate degrees: Master of Religious Education (M.R.E.), Doctor of Religious Education (D.R.E.), Master of Arts in History of Religion (M.A.), Doctor of Philosophy in History of Religion (Ph.D.), Master of Arts in Scripture (M.A.), and Doctor of Philosophy in Scripture (Ph.D.). For a statement of the detailed requirements for each of these degrees, consult the Graduate School Catalog.

Graduate School

Wesley P. Lloyd, Dean (208 ASB)

GENERAL INFORMATION

History and Purpose

The first graduate offerings of Brigham Young University were established in 1922. The Graduate School now offers doctoral-degree programs in 29 fields, distributed through 14 departments, and master's-degree programs in 68 fields, distributed through 39 graduate departments. Thus, a department may be responsible for the operation of the graduate program in several fields. In some circumstances, one field may include offerings from several departments. The departments fall within the areas of biological and agricultural sciences, business, education, family living, fine arts and communications, humanities and social sciences, physical and engineering sciences, physical education, religious instruction, and industrial education.

Graduate Faculty

The faculty of the Graduate School consists of members of the general faculty who are approved by the dean of the Graduate School from among those who hold the rank of professor or associate professor, or assistant professor with a doctoral degree, and others approved by the Graduate Council. It is the responsibility of the graduate faculty to formulate and recommend University-wide requirements for all graduate degrees and to recommend regulations and facilities to promote the scholarly activities and research interests of graduate students.

The general provisions of the graduate programs are established by the graduate faculty, subject to review by the academic vice-president or the President of the University. Special consideration is given to the circumstances and needs of each department or doctoral area. Programs are established on a broad base to permit the departments and the graduate school to regulate specific requirements. The specific requirements for a given degree are proposed by the department concerned and reviewed by the Graduate Council, the dean of the Graduate School, and the administration.

Administration of the Graduate School

The Graduate Council. The chief administrative body for the graduate program is the Graduate Council, which includes the dean of the Graduate School as chairman, the director of research, four members of the graduate faculty elected at large for terms of three years and one member of the graduate faculty elected for a three-year term from each of the areas of subject matter included in the undergraduate colleges. The academic vice-president and the director of libraries are ex officio members of the council. The Graduate Council is empowered to act for the graduate faculty on all student petitions and on departmental requests for approval of faculty members for graduate instruction and supervision, and initiates policy proposals regarding the graduate program.

The Graduate Dean. The dean of the Graduate School as immediate administrator of the graduate program of the University is responsible, under authorization of the academic vice-president and the President, to execute policy and procedure of the Graduate School. He serves as chairman of the Graduate Council and conducts meetings of the graduate faculty.

GENERAL REQUIREMENTS

Admission to the Graduate School

At Brigham Young University all students who have the bachelor's degree from an accredited university register with the Graduate School, except in the case of a student who is seeking a second bachelor's degree.

Requirements for Admission on a Degree-Seeking Basis. For admission as a degree-seeking graduate student an applicant must present a 3.0 (B) cumulative average during his latest two years of academic work or during a later period approved by the department and the dean of the Graduate School. The applicant

may be required to furnish additional evidence concerning his ability to pursue graduate work in his major field, such as capacity for research or creativity, facility in written and oral expression, and appropriate professional objectives; or through qualifying examinations. Remedial work or other requirements may be prescribed.

A student whose native language is not English is cautioned that adequate command of the English language is indispensable to successful graduate work in this institution. He must include with his application for admission a statement from a responsible official that the applicant knows how to read, write, speak, and understand the English language sufficiently well to be able to pursue a satisfactory program of study in the Graduate School. Admission ordinarily will be granted on a provisional basis pending the applicant's experience on the campus that demonstrates his ability to do successful graduate work.

Procedure for Admission on a Degree-Seeking Basis. To be admitted to the Graduate School on a degree-seeking basis, a student should file with the Office of the Graduate Dean an application which includes the following: (1) a form for admission or readmission to the University (unless the student was in attendance the preceding semester), (2) two transcripts of all previous college work (if that work was not done at Brigham Young University), (3) a form for admission to Graduate School on a degree-seeking basis, and (4) three letters of recommendation. Two of these letters should relate to the student's academic ability and the third to his character. These letters should be sent directly to the Office of the Graduate Dean by those making the recommendations. Forms for application and for letters of recommendation are provided by the Office of the Graduate Dean.

Application forms should be filed at least one month before the beginning of the semester in which the student plans to begin his work. Students who do not have their applications filed by this date cannot be assured that their applications will be acted upon by registration time.

The forms are evaluated by the department in which the student intends to major and by the dean of the Graduate School. Permission to register and to seek a higher degree is on notification by the dean of the Graduate School.

Provisional Students. The student whose academic record is below 3.0 (B) but not below 2.5 for his latest two years of academic work, or who matriculated from a university which is not accredited, may be admitted on a provisional classification upon the recommendation of his department chairman and approval of the graduate dean. (1) A student classified as provisional, due to grade point, shall be required to submit a minimum of 12 semester hours of graduate or approved upper-division credit with a "B" average before being reconsidered for full degree-seeking status. If acceptable to the department, graduate or approved upper-division credit in an amount of 16 hours received while on provisional status may be counted toward a graduate degree. (2) For special and significant reason an advisory committee may recommend that graduate or approved upper-division credit beyond 16 hours and not in excess of 21 hours earned during provisional status be granted toward the degree. Final action on such a request will be the responsibility of the graduate dean.

Admission on a Non-Degree-Seeking Basis. A student with the bachelor's degree may register on a non-degree-seeking basis for courses for which he is prepared with the understanding that no credit earned during non-degree classification can later be used toward a graduate degree. To be admitted to the Graduate School on a non-degree-seeking basis, a student should file with the Office of the Graduate Dean an application for admission or readmission, furnish an official transcript of all preceding work at institutions attended (if that work was not done at Brigham Young University), show evidence of having received the bachelor's degree, and present an academic record of 2.0 or higher. Admission is by means of a registration permit issued by the Office of the Graduate Dean. If a student has been in attendance at Brigham Young University the previous semester, registration materials are automatically prepared for him.

Graduate Credit for Seniors. If, during the last semester of the senior year, a candidate for a baccalaureate degree finds it possible to complete all requirements for such a degree with a registration of fewer than sixteen hours of undergraduate credit, he may register for graduate credit to the extent that the total

registration shall not exceed sixteen hours during the semester. A form provided by the Office of the Graduate Dean, stating that all baccalaureate requirements are being met during the current semester, must be signed by the appropriate undergraduate dean and presented to the dean of the Graduate School prior to such registration. This registration does not constitute permission to seek a higher degree.

Transfer Credit. Graduate Credit acceptable to a student's advisory committee not in excess of 10 semester hours may be transferred from another accredited university upon the approval of the student's advisory committee and the Graduate Council. Forms for petitioning for such transfers are available in the Office of the Graduate Dean. Credit transferred must represent work which is a fair and reasonable equivalent of corresponding work at this University. All transferred credit must be of grade "B" or better. At least twenty semester hours toward the master's degree must be taken on the Brigham Young University campus in Provo.

Student Load. A regular academic load for graduate students not employed on a part-time basis is from 10 to 16 semester hours or their equivalent in research. Teaching assistants and others employed part-time should limit their loads to fewer than 14 credit hours and not less than 6 hours as approved by the registration adviser and the dean of the Graduate School. Full-time employees should register for not more than 5 semester hours. Experience has shown that because of the intense character of graduate work and the academic grade-point average required, students usually should take less than the maximum load permitted.

Scholastic Standards. The degree-seeking student who fails to maintain a 2.7 grade-point average or higher in his graduate work each semester will be placed on probation and must earn a "B" (3.0) average in graduate level work the next semester or he ceases to be classified on a degree-seeking basis. The average grade of all graduate work attempted must be at least "B." At least three-fourths of all work applying on the degree must be of grade "B" or better; none of the remainder may be of a grade lower than "C." A student with a cumulative grade-point average under 2.0 is not eligible for registration in the Graduate School under any classification.

Departmental Requirements. Special departmental requirements for advanced degrees are listed under each major department.

Application for Graduation. A student expecting a graduate degree should secure from the Office of the Graduate Dean an application for graduation form and pay the graduation fee of \$20 at the Treasurer's Office. This should be done not later than January 15 for June graduates and not later than March 15 for August graduates, and before filing the thesis with the Office of the Graduate Dean or scheduling the final examination. A \$3 late fee will be charged if graduation fee is paid after the above dates.

Graduation. All graduating students must attend the graduation exercises unless they have made satisfactory explanations of absence and have been officially excused under the authority of the President of the University. The request to be excused from the commencement exercises must be presented in writing to Vice-President Harvey L. Taylor, at least two weeks prior to commencement. Extreme emergencies of either illness or death in the family are the only exceptions to this requirement. Students not officially excused from the commencement will not be graduated until they attend a later commencement.

GRADUATE DEGREE PROGRAMS OFFERED BY DEPARTMENTS

Doctor of Philosophy
 Bacteriology
 Botany
 Chemistry
 Analytical-Physical Chemistry
 Biochemistry
 Inorganic Chemistry
 Organic Chemistry
 Physical Chemistry

Communications
 Journalism
 Family Life Education
 Child Development
 Family Relationships
 Marriage Counseling
 Geology
 Economic Geology and Mineralogy
 Stratigraphy, Sedimentation, and
 Paleontology

Doctor of Philosophy (continued)

Structural, Field, and Dynamic
Geology
Graduate Department of Education
Educational Psychology
Graduate Studies in Religious Instruction
Bible and Modern Scripture
History of Religion
History
Languages
French
German
Spanish
Music
Physics
Psychology
Clinical Psychology
General Psychology
Sociology and Anthropology
Zoology and Entomology

Doctor of Education

Graduate Department of Education
Curriculum and Instruction
Educational Administration
Educational Psychology

Doctor of Religious Education

Graduate Studies in Religious Instruction
Religious Education

Master of Arts

Archaeology
Art
Painting and Sculpture
Design and Crafts
Dramatic Arts
Interpretation
Radio and Television
Theatre and Dramatic Arts
English
American Literature
English Literature
Graduate Department of Education
Educational Administration
Educational Psychology
Elementary Education
Personnel and Guidance
School Psychology (interdepartmental)
Secondary Education
Special Education
Graduate Studies in Religious Instruction
Bible and Modern Scripture
History of Religion
History
Institute of Government Service
State and Local Government
National Government
International Affairs
Languages
French
German
Latin
Portuguese
Spanish
Music
Music Education
Music Theory
Musicology
Physical Education
Political Science
Recreation
Speech
General Speech
Public Speaking

Master of Science

Agronomy
Animal Husbandry
Bacteriology

Botany

Business Education and Office
Management
Chemical Engineering Science
Chemistry
Analytical-Physical Chemistry
Biochemistry
Inorganic Chemistry
Organic Chemistry
Physical Chemistry
Civil Engineering Science
Economics
Electrical Engineering Science
Family Life Education
Child Development
Family Relationships
Homemaking Education
Food and Nutrition
Geography
Geology
Economic Geology and Mineralogy
Stratigraphy, Sedimentation, and
Paleontology
Structural, Field, and Dynamic
Geology
Health and Safety Education
Industrial Education
Institute of Government Service
State and Local Government
National Government
International Affairs
Mathematics
Mechanical Engineering Science
Physical Education
Physics
Political Science
Psychology
General Psychology
School Psychology (interdepartmental)
Sociology and Anthropology
Speech
Speech Pathology and Audiology
Statistics
Zoology
Natural History
Entomology
Morphology and Experimental
Zoology

Master of Accountancy

Accounting

Master of Business Administration

Business Management

Master of Education

Graduate Department of Education
Educational Administration
Educational Psychology
Elementary Education
Personnel and Guidance
School Psychology
Secondary Education
Special Education

Master of Fine Arts Degree

Art

Master of Religious Education

Graduate Studies in Religious Instruction

Religious Education

Minors are offered in the fields listed above in addition to the following fields:

Agricultural Economics
Applied Music
Basic Chemistry
Business Management
Educational Philosophy and Programs
Finance and Banking
Industrial Management
Library Science
Marketing
Statistics

GRADUATE DEGREE PROCEDURE AND REQUIREMENTS**Doctor of Philosophy Degree**

The Doctor of Philosophy degree is awarded for distinguished attainment in a recognized field of learning, not merely for the completion of courses of study.

Classification of Students. Students admitted to the Doctor of Philosophy degree program are classified as doctoral applicants and doctoral candidates. The student must be admitted to degree-seeking status as a doctoral applicant at Brigham Young University not later than the beginning of his last three semesters of full-time study intended to apply on the degree. The student is admitted to candidacy after meeting conditions for admission to candidacy and before registering for the last two semesters of full-time study intended to apply on the degree.

Advisory Committee. The student's program and his dissertation are developed under the direction and supervision of an advisory committee. The advisory committee for a student working for the Doctor of Philosophy degree consists of at least three members. These members are nominated by the student from the graduate faculty of his major and minor fields in consultation with the chairman of his major department and with the approval of the dean of the Graduate School. The chairman of the advisory committee is a representative of the major field. All work which is to apply toward the Doctor of Philosophy degree must be approved by the advisory committee.

As soon as a student's program of study is determined in consultation with the advisory committee, he should supply each member of the committee with a copy of the program, and file with the Office of the Graduate Dean a properly signed copy.

The membership of the advisory committee may be changed with the approval of all prospective members of the newly constituted committee, the chairman of the major department, and the dean of the Graduate School. After such a change the student reviews his entire program with the new committee.

Academic Requirements. The student will select a major field of study and at least one minor or supporting field approved by the department chairman and the dean of the Graduate School. Specific requirements in these fields are described by the departments. The equivalent of a minimum of three years of full-time study beyond the bachelor's degree is required. A full semester of residence credit is defined as from twelve to sixteen hours on course work or the equivalent in research per semester. The advisory committee has authority to decide what work will be accepted to meet these requirements, and may accept or require up to two years of full-time study elsewhere. Ordinarily two years of full-time course work or research is to be taken on the Brigham Young University campus in Provo. At least two consecutive semesters of work, 24 hours or its equivalent, must be taken on the Provo campus. For special reason and on recommendation of the student's advisory committee and by final authorization of the Graduate Council, the minimum time in residence on the Provo campus may be reduced to two full semesters during which 24 or more credit hours will be earned.

Language Requirement. Before completing his comprehensive examinations and being admitted to candidacy, the student must present satisfactory evidence of proficiency in two foreign languages, one of which must be French or German. The selection of both required languages will be made in consultation with the student's advisory committee. In exceptional cases the student may petition the Graduate Council to substitute another language for French or German. Minimum oral facility must be demonstrated in one language to be used in fulfilling the requirements for the Doctor of Philosophy degree.

Language examinations for the Ph.D. degree and for other graduate degrees, as required, will be administered and evaluated by the language faculty of the University. The examinations will be given only during the last full week of October, February, April, and July, according to the following schedule: Monday, French; Tuesday, German; Wednesday, Spanish; Thursday, Russian; Friday, all other languages. The student must file with the Office of the Graduate Dean at least two weeks prior to the date of the examination an application to take a language examination.

The language examination will consist of the translation of 600 words which represent passages taken from materials selected by the student's major department. The translation must be rendered into acceptable written English with the meaning of the passage in the original language coming through the translation unimpaired. Minimum oral facility, if required, is limited to the ability to carry on a simple conversation with acceptable pronunciation.

An examination for a given language may be taken the first time without the payment of any fee or special permission. Approval for the second trial must be the written permission of the chairman of the academic department and payment of a \$10 fee. Subsequent attempts must satisfy the same requirements as the second examination and in addition require the written permission of the graduate dean.

Comprehensive Examination. The student must pass a comprehensive examination on his doctoral fields under the direction of his advisory committee. This examination will normally be given at the end of the second year of graduate study.

Admission to Candidacy. Satisfactory completion of a comprehensive examination and the language requirement is necessary for admission to candidacy for the Doctor of Philosophy degree. The student has the responsibility of filing with the Office of the Graduate Dean a form, provided by the same office and signed by the advisory committee and the chairman of the major department, stating that all conditions for admission to candidacy have been met and that the dissertation subject has been approved.

Notice by the dean of the Graduate School then admits the student to candidacy for the degree. This will normally be done after the completion of two years of graduate work. At least two semesters of full-time study must be completed after admission to candidacy and before graduation.

Dissertation. After being admitted to candidacy, the student, under the direction of his advisory committee, pursues original research toward an acceptable dissertation.

On special authorization of the Graduate Council an academic department may choose as a program Provision No. 2 as indicated below. In departments where such approval has been granted, the candidate may choose either of the two following provisions for filing the dissertation.

1. A complete, signed but unbound copy of the dissertation in final form, and one extra original copy of an approved abstract (two extra original copies if the student is majoring or minoring in education) not exceeding in length 60 lines of 60 spaces each, must be filed with the Office of the Graduate Dean at least fifteen days prior to the final examination and not later than thirty days before graduation.

2. An approved copy of the dissertation in good form, but not in final form, together with one extra original copy of an approved abstract (two extra original copies if the student is majoring or minoring in education) not exceeding in length 60 lines of 60 spaces each, must be filed with the Office of the Graduate Dean not later than 45 days prior to graduation and fifteen days prior to the final examination.

If Provision No. 2 is chosen, a complete, signed, but unbound copy of the dissertation in final form and one extra original copy of an approved abstract (two extra original copies if the student is majoring or minoring in education) must be filed with the Office of the Graduate Dean at least 15 days before graduation.

A minimum of four copies of the dissertation and five copies of the abstract is required by the University. The student is also required to arrange for the microfilming of his dissertation.

After the dissertation has been accepted by the Office of the Graduate Dean, the student will deliver 4 or more copies to Room 112 J. Reuben Clark, Jr., Library and pay the \$25 fee for publishing the dissertation through University Microfilm Incorporated. The library will also collect \$2.75 for each copy of the dissertation to be bound or a minimum of \$11. The student will secure further

instructions regarding binding, microfilming, and publication of dissertations in Room 112, J. Reuben Clark, Jr., Library.

Final Examination. Not later than fifteen days before graduation, the student must pass a final examination on his dissertation and applicable subject matter given by a committee of not fewer than five members. The committee consists of the advisory committee, plus such other members as the department chairman and the dean of the Graduate School may designate.

Time Limit. All academic credit applying toward the Doctor of Philosophy degree must be completed within nine years.

Doctor of Education Degree

Admission Requirements. For admission to degree-seeking status as a doctoral applicant the student must have completed 22 semester hours of education or possess certification as a teacher, must have completed two years of successful professional experience, and must possess demonstratable acquaintance with the field of education. The student will be tested for familiarity with background factors of significance to education.

Classification of Doctoral Students. Students seeking the Doctor of Education degree are classified as **doctoral applicants** and **doctoral candidates**. The student must be admitted to degree-seeking status as a **doctoral applicant** at Brigham Young University during the first semester he is enrolled as a full-time graduate student. He is **admitted to candidacy** after meeting conditions for admission to candidacy and before registering for the field project and internship.

Advisory Committee. The early advisement of the student, until he passes the entrance examination, is supervised by the graduate committee in education which assigns him a specific adviser in his major field.

When the student successfully passes the entrance requirements, he is expected to consult with his department chairman to arrange for his advisory committee. The chairman and one member of the advisory committee must be in the student's major field, and there must be at least two additional members representing two other fields. The chairman of the major department is a member ex officio. All work which is to apply toward the Doctor of Education degree must be approved by the advisory committee.

As soon as his program of study is determined in consultation with the advisory committee, the student should supply each member of the committee with a copy of the course outline. He should file one copy, signed by the committee members, with the Office of the Graduate Dean and one copy with the graduate office of the College of Education.

The membership of the advisory committee may be changed with the approval of the graduate committee in education and the dean of the Graduate School.

Academic Requirements. The Ed.D. degree is awarded for distinguished attainment in a recognized field of learning. The student must meet the planned program as established by his major department. The equivalent of a minimum of three years of full-time study beyond the bachelor's degree is required. Full-time study is defined as ten to sixteen hours in course work or the equivalent in research per semester. The advisory committee has authority to decide what work will be accepted to meet these requirements, and may accept or require up to two years of full-time study elsewhere. One year must consist of two consecutive semesters on the campus of the University, during which the student takes one two-hour seminar each semester. There is no foreign language requirement. The student must demonstrate proficiency in statistics to the satisfaction of the advisory committee.

Examinations. A qualifying examination is administered to all doctoral students after approximately fifty semester hours have been completed. A final written examination is administered to all doctoral students at the completion of their course work.

Admission to Candidacy. To be eligible for advancement to candidacy the student must pass the qualifying examination and the final written examination and submit a prospectus approved by his doctoral committee.

Notice from the Office of the Graduate Dean then admits the student to candidacy for the degree. This normally will be done after the completion of his graduate courses.

Field Project and Report. A research project for the improvement of a program of administration and instruction must be developed under the direction of the student's advisory committee. The report of the field study must meet the same standard of format as the Doctor of Philosophy dissertation and must be submitted under the same schedule and publication requirements.

Final Oral Examination. The final oral examination is administered at the conclusion of the field project. For details with reference to the examination procedure the student may inquire at the Graduate Department of Education, Room 205, David O. McKay Building.

Time Limit. All academic work applying toward the Doctor of Education degree must be completed within a period not to exceed nine years.

Master's Degrees

The Graduate School offers the following master's degrees: Master of Arts, Master of Science, Master of Accountancy, Master of Business Administration, Master of Education, Master of Fine Arts, and Master of Religious Education. The master's degree is awarded upon completion of general and departmental requirements. For specific requirements, see the departmental listings in the Graduate School Catalog.

Admission on a graduate degree-seeking basis must be completed before the student registers for the last 15 hours of credit intended to apply on the degree.

Procedure for the Graduate Degree-seeking Student. Following admission to the Graduate School on a degree-seeking basis, the student should secure from the Office of the Graduate Dean forms covering the following headings and should return them to the same office within the time limit indicated.

Advisory Committee. The advisory committee must be formed and the names of the members on file in the Office of the Graduate Dean within two months after a student's first registration on a degree-seeking basis.

The student's program and his thesis are developed under the direction and supervision of the advisory committee. The committee for the master's degree consists of at least two members, one member representing the major field and one the minor or supporting field. These members are nominated by the student from the graduate faculty of his major and minor or supporting fields, in consultation with the chairman of his major department and with the approval of the dean of the Graduate School. The chairman of the advisory committee is a representative of the major field. This committee advises the student in his proposed program, approves his registration, and directs his research and the work on his thesis. At least 15 hours must be taken after the advisory committee has been formed and must be approved by the advisory committee prior to registration. All work which is to apply toward an advanced degree must be approved by the advisory committee.

An advisory committee may be changed with the approval of all prospective members of the newly constituted committee, the chairman of the major department, and the dean of the Graduate School. After such a change, the student reviews his entire program with the new committee.

English 99. The English 99 form is due during the first semester of graduate work. Students who lack ability to write clearly and correctly (as determined by the chairman of the student's major department), are required to enroll in English 99, Problems in Thesis Writing, a noncredit course. Students should take this course at the earliest possible time.

Course Outline. The course outline constitutes the official program of the graduate student and is due in the Office of the Graduate Dean within 30 days after first registration as a degree-seeking student.

Revisions. When there is a needed change in the student's program, advisory committee membership, etc., a memo should be submitted to the Office of the Graduate Dean, recommending the revision and signed by all members of the advisory committee.

Title Card and Prospectus of Master's Thesis. Before beginning his research or creative work, the student must obtain approval of the thesis problem from his advisory committee and must file with the Office of the Graduate Dean a title card and a prospectus, both signed by the members of the advisory committee. He is required to complete at least one semester of study after this is done.

Filing of Thesis. On special authorization of the Graduate Council an academic department may choose as a policy Provision No. 2 as indicated below. In departments where such approval has been granted, the candidate may choose either of the two following provisions for filing the thesis.

1. A complete, signed but unbound copy of the thesis in final form and one extra original copy of an approved abstract (two extra originals if the student is majoring or minoring in education) not exceeding in length 60 lines of 60 spaces each, must be filed in proper form with the Office of the Graduate Dean at least fifteen days prior to the final examination and not later than thirty days before graduation.

2. An approved copy of the thesis in good form, but not in final form, together with an approved copy of the abstract, not exceeding in length 60 lines of 60 spaces. These must be filed in proper form with the Office of the Graduate Dean not later than 45 days prior to graduation and fifteen days prior to the final examination.

If provision No. 2 is chosen, a complete, signed, but unbound copy of the thesis in final form and one extra original copy of an approved abstract (two extra original copies if the student is majoring or minoring in education) must be filed with the Office of the Graduate Dean at least 15 days prior to graduation.

The University requires a minimum of four copies of the thesis and five copies of the abstract. When the material is assembled for binding, the abstract should follow the thesis and bibliography.

Detailed directions for the form of the thesis may be obtained from the Office of the Graduate Dean. A department may authorize a maximum of six hours of thesis credit.

Time Limit. Graduate credits are applicable toward the master's degree only within a six-year period from the time they are received. Students are counseled to complete their programs without notable interruption.

Procedure for the Degree-Seeking Student. The student's program and his thesis are developed under the direction and supervision of an advisory committee. The advisory committee for a student seeking the master's degree consists of at least two members. These members are nominated by the student from the graduate faculty of his major and minor department in consultation with the chairman of his major department and with the approval of the dean of the Graduate School. The chairman of the advisory committee is a representative of the major field. This committee advises the student in his proposed program, approves his registration, and directs his research and the work on his thesis. The advisory committee must be formed and the names of the members on file in the Office of the Graduate Dean within two months after a student's first registration on a degree-seeking basis. At least 15 hours must be taken after the advisory committee has been formed and must be approved by the advisory committee at registration. All work which is to apply toward an advanced degree must be approved by the advisory committee.

An advisory committee may be changed with the approval of all prospective members of the newly constituted committee, the chairman of the major depart-

ment, and the dean of the Graduate School. After such a change, the student reviews his entire program with the new committee.

Amount and Distribution of Credit. The master's degree requires a minimum of 30 semester hours of credit and may be obtained by completing one of the options listed below. The second option is available only after the Graduate Council has approved a program which a department has submitted to it.

Applicable to Options I and II is the provision that at least 21 credit hours must consist of courses for which there is a systematic body of subject matter. Each of such courses is to be identified with a given course number such as ordinarily identifies a formal course or seminar. Individual reading, thesis, research, and special problems may not be included in these latter totals.

Option I. At least 15 semester hours, exclusive of thesis, must be in the major field and at least 9 semester hours in a minor field approved by the major department.

Option II. Thirty hours must be in the major field or in direct support of the major field. Courses outside the major field and considered as in direct support of the major field must be specified. Such courses should not constitute more than 12 of the 30 credit hours. A department will be permitted to adopt Option II as a permanent policy on request of the department and on approval of the Graduate Council. The department need not list courses which are considered to be in direct support of the major field, but when Option II is used, the student's committee should consist of a representative from the major field and one from a supporting area.

A graduate student may have applied toward requirements for the master's degree a limited amount of credit earned by taking certain upper division undergraduate courses which have been approved by the graduate advisory committee, started at the time of registration, and which appear on the course outline of a degree-seeking student. This outline should be completed within two months after a student is registered in a degree-seeking status. No such work carrying a "C" grade will be applied toward the master's degree. At least 20 hours of the credit for the master's degree must be in the 500 series or above and taken on the Brigham Young University campus in Provo.

Neither lower division nor correspondence credit may be applied toward a graduate degree.

Graduate Credit for Seniors. If, during the last semester of the senior year, a candidate for a baccalaureate degree finds it possible to complete all requirements for such a degree with a registration of fewer than sixteen hours of undergraduate credit, he may register for graduate credit to the extent that the total registration shall not exceed sixteen hours during the semester. A form provided by the Office of the Graduate Dean stating that all baccalaureate requirements are being met during the current semester must be signed by the appropriate undergraduate dean and presented to the dean of the Graduate School prior to such registration. This registration does not constitute permission to seek a higher degree.

Transfer Credit. Graduate credit acceptable to a student's advisory committee and not in excess of 10 semester hours may be transferred from another accredited university upon the approval of the student's advisory committee and the Graduate Council. Forms for petitioning for such transfers are available in the Office of the Graduate Dean. Credit transferred must represent work which is a fair and reasonable equivalent of corresponding work at this University. All transferred credit must be of grade "B" or better. At least twenty semester hours toward the master's degree must be taken on the Brigham Young University campus in Provo.

Student Load. An academic load for graduate students not employed on a part-time basis is from 10 to 16 semester hours or their equivalent in research. Teaching assistants and others employed part-time should limit their loads to fewer than 14 credit hours and not less than 6 hours as approved by the registration adviser and the dean of the Graduate School. Full-time employees

should register for not more than 5 semester hours. Experience has shown that because of the intensive character of graduate work and the academic grade-point average required, students should usually take less than the maximum load permitted.

Graduation. All graduating students must attend the graduation exercises unless they have made satisfactory explanations of absence and have been officially excused under the authority of the President of the University. The request to be excused from the commencement exercises must be presented in writing to Vice-President Harvey L. Taylor, at least two weeks prior to commencement. Extreme emergencies of either illness or death in the family are the only exceptions to this requirement. Students not officially excused from the commencement will not be graduated until they attend a later commencement.

Final Oral Examination. The candidate for graduation must pass a final oral examination not less than 15 days prior to graduation if Provision No. 1 is chosen, and not less than 30 days prior to graduation if Provision No. 2 is chosen.

It is the duty of the student, after submitting final copies of his thesis to the Office of the Graduate Dean, to schedule the final examination, after obtaining from the chairman of the major department the names of the examining committee. Forms are available for this purpose at the Office of the Graduate Dean.

The examination committee for the master's degree will consist normally of at least four members. There must be at least two examiners from the student's major field and one examiner from the student's minor or supporting field. There shall be on the committee at least two examiners who are not members of the student's thesis advisory committee. The committee may consist of a minimum of three examiners if constituted as provided herein. In any case, two or more negative votes will constitute failure in the examination. Other members of the graduate faculty may attend the examination and enter the discussion, but they may not vote.

The final oral examination consists of a student's defense of his thesis and a searching examination into the student's preparation and competence in his major and minor or supporting fields.

Sixth-Year Certificate in Educational Administration

The sixth-year certificate in educational administration is offered for the preparation of school principals and supervisors, and is awarded after completion of requirements listed under the Graduate Department of Education.

Scholarships, Fellowships, and Assistantships

Graduate awards are administered through the committee on graduate awards under the chairmanship of the dean of the Graduate School.

Brigham Young University Fellowships and Scholarships. The University has established the following fellowship and scholarship offerings for graduate students:

- 25 scholarships for the payment of tuition and standard fees
- 50 fellowships ranging in value from \$500 to \$2,000 including tuition and standard fees

Scholarships and fellowships are awarded on the basis of high academic achievement and are available to students in all areas of graduate study. Recipients must possess a baccalaureate degree at the beginning of the period for which the scholarship or fellowship is granted and must be candidates for a graduate degree. A scholarship recipient may hold a one-half time departmental teaching assistantship concurrently with his scholarship. A fellowship recipient may hold up to one-quarter time teaching assistantships during his fellowship tenure. Applications for the academic year beginning in September should be filed by the preceding March 15.

National Defense Education Act. The University participates in both Title IV and Title VI of the National Defense Education Act. The Modern Foreign

Language Program (Title VI) usually is opened in late November and has a deadline date of mid-January. Announcements concerning the Title IV 3-year awards are usually released in late December with a deadline acceptance date of March 1.

National Science Foundation. The University cooperates with the National Science Foundation, and fellowships under this program are available in several fields.

Application. Information regarding scholarships and fellowships may be obtained from the Graduate Awards Office, Room 227-D Abraham O. Smoot Administration and General Services Building.

Teaching and Laboratory Assistantships. Many departments employ graduate students as teaching or laboratory assistants. Assistantships are awarded on the basis of scholastic accomplishment and competence to serve in a specific department. Remuneration, based on the amount of time devoted to assigned duties varies from \$850 to \$2,000 per academic year. For application forms and information regarding teaching assistantships the graduate student should write directly to the chairman of his specific academic department in the University.

Research Assistantships. A substantial number of research assistantships and research fellowships are available at Brigham Young University. Recipients work part-time on research projects under the supervision of a faculty member. Funds are provided by the University, the government, or private sources. Remuneration for assistantships varies from \$1,600 to \$2,800 per calendar year. For application forms and information regarding research assistantships the student should write directly to the chairman of his specific academic department in the University.

Summer Session

Graduate students doing part of their work at the University during the summer will find a wide range of graduate courses suited to their purpose. Summer School is divided into two terms. Students may register for a maximum of six credit hours per term.

Library Facilities

The Brigham Young University library presently is expanding its research collections on a major scale. With the completion of the J. Reuben Clark, Jr., Library Building in 1961 it was possible to bring together parts of the collection that had been temporarily housed in almost every major building on the campus. The general collection is available on open shelves on four of the five floor levels: two below and two above the ground floor. The central reference collection, the public catalog, the circulation desk, and the administrative offices are located on the ground level. An information booklet is available to assist students in the use of these new facilities. Study space is available on each floor interspersed with stack areas. Special study facilities are provided for the use of graduate students and other mature scholars.

With the growth of the collection an effort is being made to acquire those library tools necessary to a graduate research program. A well-trained staff is available to assist scholars in the use of the book collection and to interpret the specialized bibliographies, catalogs, guides, and indexes.

The University Library contains an extensive collection of titles on microfilm and microcards. A wide selection of professional journals and of other current periodicals is also available, as well as local, regional, and national newspapers.

The facilities of the L.D.S. Genealogical and Historical Library in Salt Lake City, which contains over 500,000 titles, also are available by special arrangement, as are collections of Utah and Mormon materials in the L.D.S. Church Historian's Library in the same city.

The Graduate Catalog

For more detailed information on graduate degrees, admission to the Graduate School, and departmental offerings and requirements, refer to the Graduate School Catalog.

List of Courses

Semester System. Courses of study at Brigham Young University are offered and credit for satisfactory completion is granted on a semester basis.

Course Numbering System. Level of instruction of courses is shown by the numbers assigned:

Course Number	Type of Course
1 to 99	Preparatory and remedial (noncredit)
100 to 299	Lower division
300 to 499	Upper division
500 to 599	Advanced undergraduate or graduate
600 to 799	Graduate

Credit-Hour Designation. The three-number code which appears in parentheses immediately after each course title has the following significance:

First number:	Semester hours of credit
Second number:	Class hours of lecture, recitation, or seminar meeting per week or Minimum hours of individual study required per week
Third number:	Laboratory hours required per week or Hours of field study or individual research per week

Abbreviations and Symbols. The following abbreviations and symbols are used in the List of Courses section:

Arr.	Class or laboratory hours arranged
ea.	Credit-hour designation applies to each course number listed
F., S., Su.	Fall or Spring Semesters or Summer Session
G-BS	Fulfills general education requirements in biological science
G-HA	Fulfills general education requirements in humanities and aesthetics
G-PS	Fulfills general education requirements in physical science
G-R	Fulfills general education requirements in religion
G-SS	Fulfills general education requirements in social science
m	Designates course which may be used to fulfill requirements for a minor
*	In Administration and Faculty section and in departmental faculty listings, faculty member on leave In Student Academic Services section general education courses which have prerequisites.
□	Course originating in one department which may count for credit in another department

Cross Referencing of Courses. Each course is listed completely only once in the catalog. If the course may count in another department, it is listed in abbreviated form in that department and is preceded by a special symbol, □.

Interdepartmental Courses. Interdepartmental courses are taught in several areas. In the course listing which follows, these courses appear under the headings of agricultural education, devotional and forum assemblies, humanities, and physical science.

Graduate Courses. For regulations governing study beyond the bachelor's degree, see the Graduate School section of this catalog and the Graduate School Catalog. Advanced undergraduate or graduate courses (500 series) may be used for graduate credit with certain limitations.

Reservation of Right to Change Courses. At the time of printing of this catalog, the University intends to give the courses listed herein, but reserves the right to eliminate or discontinue any of them or to add new courses.

Accounting



Professor: R. J. Smith.

Associate Professors: Orton (chairman, 350 JKB), Johnson, Skousen.

Assistant Professors: Grover, Hubbard, McAllister, Park, Sonderegger, Taylor, White.

Instructor: Woodfield.

The Department of Accounting trains students in the use of objective measuring methods in the financial dealings of business and attempts to develop men of high professional status in the use, analysis, interpretation, and projection of accounting data. The accountant must be aware of the dynamic changes in general business methods and goals and must develop practical methods of measuring and reporting these changes accurately and of integrating them into acceptable accounting terminology and procedures.

The training given leads to three principal areas of service: (1) the certified public accountant who serves industry and the public as an independent professional man skilled in accounting and auditing techniques; (2) skilled personnel in electronic data processing who must develop superior methods in the performance which will aid in guiding the business and the economy in periods of rapid change; and (3) the controller or industrial accountant who can serve effectively in the management team, being conversant with and sensitive to the progressive innovations taking place in business. In this area the Department of Accounting provides an opportunity to acquire the business management perspective which will qualify them for administrative positions. In addition to these three principal areas the accountant may engage in government service or enter the teaching profession.

Requirements

Mathematics. All majors in the College of Business must complete Math. 105 or the equivalent. Students will be classified on the basis of performance in the placement test in mathematics given to freshmen. Those whose scores indicate proficiency in mathematics will be permitted to go directly into Math. 105; others will be required to take Math. 101 before taking Math. 105.

Majors. Majors in the Department of Accounting are required to take the courses listed below:

Math. 105 (or equivalent)	3 hours
Bus. Mgt. 340, 347, 348	9 hours
Econ. 111, 112 and 311 or 312	9 hours
Statistics 221	3 hours
Acctg. 201, 202, 232, 301, 302, 312, 342, 355, 475, and a minimum of six additional hours selected from course offerings originating in the Department of Accounting with the approval of the student's adviser. (Acctg. 596 and 600 numbered courses may not be selected for this purpose.) No more than 3 hours of "D" grade in the required courses in accounting will be accepted toward graduation.	33 hours

Minors. Minors in the Department of Accounting should take the following courses:

Acctg. 201, 202, 301, and any additional six or more hours from the course offerings of the Department of Accounting except 232, 596, and 600 numbered courses.

Suggested Program for Accounting Majors

A suggested program which can be followed by accounting majors is given below. Each student will need to make modifications in this program to meet his individual problems. Courses marked with an asterisk (*) are required for graduation by the University, college, or department.

Freshman Year:		Hours
*Relig.		4
*Phys. ed. and Health 130		3
*Eng. (111, 112; or 115, 116)		4-6
*Phys. sci. group		3
*Hist. 170 (American Heritage)		3
*Humanities and fine arts group		3
*Econ. 111, 112 (soc. sci. group)		6
*Math. 105 (College Algebra)		3
Forum and dev. assy.		2
Electives—may be used to fill groups		3-5
		<u>36</u>

Sophomore Year:		Hours
*Relig.		4
*Phys. ed.		1
*Humanities and fine arts group		3
*Phys. sci. group		3
*Biol. sci. group		6
*Soc. sci. group		3
*Acctg. 201, 202		6
*Acctg. 232 (Business Mathematics)		3
Bus. Ed. 206 (Calculating and Posting Machines)		2
*Statistics 221 (Principles)		3
Forum and dev. assy.		2
		<u>36</u>

Junior Year:		Hours
*Relig.		4
*Humanities and fine arts group		2
*Acctg. 301, 302 (Intermediate)		6
*Acctg. 312 (Cost)		3
*Acctg. 342 (Introduction to Commercial Law)		3
*Acctg. 355 (Basic Concepts of Data Processing)		3
*Bus. Mgt. 340 (Industrial Organization and Management)		3
*Bus. Mgt. 347 (Marketing Management)		3
*Bus. Mgt. 348 (Financial Administration)		3
*Econ. 311 (Income Analysis) or 312 (Price Analysis)		3
Forum and dev. assy.		2
Electives		1
		<u>36</u>

The above courses include most of the University general education requirements and the college core requirements, as well as the basic courses in accounting. At this point the student should determine the extent to which he desires additional accounting training. A number of alternatives are available. Four plans are given below: one for those who desire to complete their training in four years and three alternative plans for those intending to complete a five-year professional program.

Four-year general accounting course, senior year:		Hours
*Relig.		4
Acctg. 332 (Advanced Business Mathematics)		2
Acctg. 420 (Taxes)		3
Acctg. 442 (Advanced Business Law)		3
Acctg. 465 (Auditing Theory)		3
*Acctg. 475 (Theory)		3
Bus. Ed. 320 (Report and Business Writing)		3
Bus. Mgt. 480 or 481 (Executive Lectures)		1

Forum and dev. assy.	2
Electives	12
	<u>36</u>

Five-year programs:**No. 1. Controllership and Industrial Accounting****Senior Year:**

*Relig.	4
Acctg. 332 (Advanced Business Mathematics)	2
Acctg. 420 (Taxes)	3
Acctg. 465 (Auditing Theory)	3
*Acctg. 475 (Theory)	3
Bus. Ed. 320 (Report and Business Writing)	3
Bus. Mgt. 420 (Human Relations)	3
Bus. Mgt. 480 or 481 (Executive Lectures)	1
Statistics 330 (Statistical Methods Used in Business)	3
Forum and dev. assy.	2
Electives—suggested courses are Acctg. 442; Bus. Mgt. 450, 451, 521, 574; Econ. 453, 461	7
	<u>34</u>

Fifth Year:

Acctg. 512 (Advanced Cost)	3
Acctg. 615 (Controllership)	3
Acctg. 521 (Advanced Taxes)	3
Acctg. 555 (Advanced Data Processing)	3
Acctg. 465 (Computer Programming)	3
Acctg. 675 (Theory)	3
Bus. Mgt. 488, 489, 589 (Business Management and Business Policy) ..	6
Econ. 576 (Government and Business)	3
Electives	6
	<u>33</u>

No. 2. Electronic Data Processing**Senior Year:**

*Relig.	4
Acctg. 332 (Advanced Business Mathematics)	2
Acctg. 420 (Taxes)	3
*Acctg. 475 (Theory)	3
Bus. Ed. 320 (Report and Business Writing)	3
Statistics 330 (Statistical Methods Used in Business)	3
Bus. Mgt. 480 or 481 (Executive Lectures)	1
Forum and dev. assy.	2
Electives—suggested courses are Acctg. 442; Bus. Mgt. 420. Statistics 241	14
	<u>34</u>

Fifth Year:

Acctg. 456 (Computer Programming)	3
Acctg. 557 (Advanced Computer Programming)	2
Acctg. 555 (Advanced Data Processing)	3
Statistics 432, 433	4
Electives—suggested courses are Acctg. 515, 675, 465; Sta- tistics 341, 434	16
	<u>28</u>

No. 3. Professional Public Accounting**Senior Year:**

*Relig.	4
Acctg. 332 (Advanced Business Mathematics)	2
Acctg. 420 (Taxes)	3
Acctg. 442 (Advanced Business Law)	3
Acctg. 512 (Advanced Cost)	2
Acctg. 521 (Advanced Taxes)	2
*Acctg. 475 (Theory)	3
Acctg. 465, 466 (Auditing)	5
Bus. Ed. 320 (Report and Business Writing)	3

Bus. Mgt. 480 or 481 (Executive Lectures)	1
Statistics 330 (Statistical Methods Used in Business)	3
Forum and dev. assy.	2
Electives—suggested courses are Acctg. 596; Bus. Mgt 420; Econ. 453	1-3
	34-36

Fifth Year:

Acctg. 501, 502 (Advanced)	6
Acctg. 555 (Advanced Data Processing)	3
Acctg. 675 (Theory)	3
Acctg. 686, 687 (CPA Problems)	8
Electives	8
	28

Students in the five-year programs may obtain a master's degree in accounting. This will require that the student be able to apply part of the credits taken in the last semester of the senior year toward the degree and/or the student will need to plan to attend school an extra summer or semester for the purpose of completing the thesis or the additional requirements under the program which provides for other work in lieu of the thesis. Any student desiring to get a master's degree should study the appropriate sections of the Graduate School Catalog.

Courses

- 201, 202. Elementary Accounting.** (3:3:0 ea.) F.S.Su. (m) Prerequisite: Math. 105 or equivalent or consent of instructor. Staff
An introductory series in basic bookkeeping techniques and control of business operations.

☐ **Business Education 206. Calculating and Posting Machines.** (2:5:0)

- 232. Mathematics of Business.** (3:3:0) F.S.Su. Prerequisite: Acctg. 201. Staff
Application of mathematics to business problems.

- 301, 302. Intermediate Accounting.** (3:3:0 ea.) F.S.Su. (m) Prerequisite: Acctg. 202. Staff

Intermediate course in accounting for general business students and for majors who need a broad foundation for specialized studies which they will take later.

- 312. Cost Accounting.** (3:3:0) F.S.Su. (m) Prerequisite: Acctg. 202. This course may be taken concurrently with 301 or 302. Staff
An introduction to the principles and practices of cost accounting.

☐ **Business Education 320. Report and Business Writing.** (3:3:0)

- 332. Advanced Mathematics of Business.** (3:3:0) F. (m) Prerequisite: Acctg. 232 or Math. 111 or permission of instructor. Staff

Selected topics from finite mathematics, vectors, and matrices, trigonometry, analytical geometry, and elementary differential and integral calculus as applied to business.

- 342. An Introduction to Commercial Law.** (3:3:0) F.S.Su. (m) Staff
A survey of modern American business law as it applies to everyday business practices.

- 355. Concepts of Data Processing Systems.** (3:2:2) F.S.Su. (m) Prerequisite: Acctg. 202. This course may be taken concurrently with 301 or 302. Staff
An introduction to data processing systems, with emphasis on mechanical and punched card applications.

- 420. Federal and State Taxes.** (3:3:0) F.S.Su. (m) Prerequisites: Acctg. 202 and preferably Acctg. 301 or Bus. Mgt. 303. Staff
Federal and state tax legislation and regulations with emphasis on individual income tax.

- 442. Advanced Business Law.** (3:3:0) S. (m) Prerequisite: Acctg. 342. Staff
Business law for accountants and businessmen, with emphasis on laws covered in professional accounting examinations.
- 456. Electronic Computer Programming.** (3:3:1) F.S. (m) Prerequisites: Acctg. 232 and Statistics 221, recommended: Acctg. 355. Staff
Basic computer logic, binary notation, operational coding, flow charting, iterative routines, subroutines, library programs, optimum coding, symbolic coding, and data processing application.
- 465. Auditing Theory and Professional Ethics.** (3:3:0) F.S.Su. (m) Prerequisites: Acctg. 302 and 312. Staff
Principles and methods of public accounting, professional responsibility and conduct, and verification techniques of accounts and financial statements.
- 466. Auditing Practice.** (3:4:0) F. (1964) Su. (1965) S. (1966) (m) Prerequisite: Acctg. 465. Staff
Practice in auditing techniques, including report writing and filings with regulatory bodies.
- 475. Current Problems in Accounting Theory.** (3:3:0) F.S.Su. (m) Prerequisites: Acctg. 302 and 312. Staff
Studies in current accounting theory.
- 501. Advanced Accounting.** (3:3:0) F. (1965) Su. (1965) S. (1966) (m) Prerequisite: Acctg. 302. Staff
Includes joint ventures, partnerships, consignments, installments, receiverships, estates and trusts, statement of affairs, and municipal and governmental accounting.
- 502. Advanced Accounting.** (3:3:0) Su. (1964) S. (1965) F. (1965) (m) Prerequisite: Acctg. 302. Staff
Home office and branch accounts and parent and subsidiary accounting.
- 512. Advanced Cost Accounting.** (3:3:0) Su. (1964) S. (1965) F. (1965) (m) Prerequisite: Acctg. 312. Staff
Budgeting, standard costs, costs analysis, and capital budgeting.
- 521. Advanced Tax Problems.** (3:3:0) F. (1964) Su. (1965) S. (1966) (m) Prerequisite: Acctg. 420. Staff
Advanced study of federal income tax, estate and gift taxes, and special problems in corporate taxation.
- 555. Data Processing Systems.** (3:3:0) F. (m) Prerequisite: Acctg. 355. Staff
Principles governing design and installation of accounting systems and the selection of equipment for optimum performance in data processing cycles.
- 557. Advanced Computer Programming.** (3:1:3) S. (m) Prerequisite: Acctg. 456. Staff
Emphasis on the solution of practical problems in data processing. Individual work on the University's computer and comparison of various computers in current use.
- 596. Accounting Internship.** (1-3:3:arr.) F.S.Su. Recommended prerequisite: Acctg. 465. Staff
Internship must be arranged in advance with the department and company.
- 615. Controllershship.** (3:3:0) F. (1964) Su. (1965) S. (1966) Prerequisites: Acctg. 302 and 512. Staff
Organization of controller's office, control techniques, interpretation of financial data and policy information.

- 675. Theory of Accounts and Statements.** (3:3:0) Su. (1964) S. (1965) F. (1965)
Prerequisites: Acctg. 302 and 312. Staff
History and development of accounting and financial statements, their meaning and interpretation. Problems in current accounting theory will be considered.
- 686, 687. C.P.A. Problems.** (3:3:1 ea.) F.S. Prerequisites: Acctg. 302, 420; and Acctg. 465 should be taken before or concurrently. Staff
Preparation for professional examination.
- 691. Research Seminar.** (1-3:1-3:0) F.S.Su. Prerequisite: Approval of graduate advisory committee. Staff
Seminar in current topics. Includes writing a research paper in proper form.
- 693. Reading and Conference.** (1-2:1-2:0) F.S.Su. Staff
Subject to be arranged with instructor.
- 699. Thesis for Master's Degree.** (1-6:Arr.:Arr.) F.S.Su. Staff
This course number should also be used for continuing registration by students working on thesis.



Students working with wiring of computers

Agricultural Economics



Professor: Nelson.

Associate

Professor: Corbridge (chairman, 370 HGB).

The Department of Agricultural Economics emphasizes the business and economic aspects of agriculture. A wide range of electives permits a student in this department to choose course work from many different areas. The student should work with advisers from the department to adapt his study program to his particular interests and needs.

Twenty-four hours, including Agr. Econ. 112, 325, 410, 490, 590; Econ. 111; and Statistics 221, are required for a major in agricultural economics. Students minoring in agricultural economics are encouraged to include Agr. Econ. 112, 325, and 410. Transfer students majoring in this department must earn at least 12 credit hours in their major field at Brigham Young University; those minoring, must earn at least 7 credit hours.

A student is encouraged to concentrate on one of the following three options: (1) basic agriculture, for those returning to the farm and primarily interested in production courses; (2) preprofessional, for those planning graduate study; or (3) agri-business, for those principally interested in the business aspects of farming or in seeking employment in related business areas.

Basic Agriculture Option. A student electing this option is advised to consider:

Agr. Econ. 112, 320, 325, 326, 350, 360, 410, 425, 525, 580.

Agron. 282, 151 and/or 302, 305, 351, 455, 457.

An. Sci. 153, 207 and/or 161, 374, 381.

Hort. 101 and/or 103, 310.

Indus. Ed.—classes as needed.

Econ. 111.

Math. 101 or 105.

Statistics 221.

Preprofessional Option. A student anticipating graduate training is advised to obtain a good background in mathematics, statistics, and economic theory.

The following classes should be included:

Agr. Econ. 101, 325, 410, 525.

Econ. 111 and/or 311, 312.

Math. 105, 106 and 112 or Acctg. 332.

Statistics 221, 336 and/or 337.

Additional classes are recommended from among the following:

Agr. Econ. 320, 326, 350, 360, 425, 490, 580, 590.

Agron. 282 and/or 151.

An. Sci. 207 and/or 153.

Econ. 511, 512.

Hort. 101 and/or 103, 310.

Statistics 337.

Agri-Business Option. Business training is emphasized in this option. Recommended courses include:

Agr. Econ. 112, 325, 410 and one or more of 320, 326, 350, 360, 425, 490, 525, 580, 590.
 Agron. 282 and/or 151.
 An. Sci. 207 and/or 153.
 Hort. 101 and/or 103, 310.
 Acctg. 201.
 Bus. Mgt. 348, 420, 451, 456, 457, 555, 557, 567, 569.
 Econ. 111, 312.
 Geog. 231.
 Statistics 221, 336 and/or 337.
 Bus. Ed. 220 and/or 320.
 Commun. 211 and/or 471.
 Speech 101, 102.

The following sequence of courses is recommended:

Freshman Year	Basic Agriculture		Pre-Professional		Agri-Business	
	F	S	F	S	F	S
Relig.	2	2	2	2	2	2
Health 130	2		2		2	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Math. 105		3		3		3
Eng. 111, 112	3	3	3	3	3	3
Agr. Econ. 112	3		3		3	
Pol. Sci. 110		3		3		3
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Forum assy.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Humanities and fine arts		2		2		2
One (or more) of the following: Agron. 151; An. Sci. 153, 207; Bact. 121; Bot. 101; Hort. 101, 103; Zool. 105	5	3	5	3	5	3
Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$	16 $\frac{1}{2}$	17 $\frac{1}{2}$	16 $\frac{1}{2}$	17 $\frac{1}{2}$
Sophomore Year	F	S	F	S	F	S
Relig.	2	2	2	2	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Chem. 101		5		5		5
Econ. 111		3*		3		3
Econ. 274	3		3		3	
Acctg. 201			5		5	
Agr. Econ. 350	3		3		3	
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Forum assy.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Biol. sci.	3	3	3		3	
Electives	2			3		3
Electives from the areas of an. sci., agron., hort.	3	3		3		3
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	17 $\frac{1}{2}$	17 $\frac{1}{2}$	17 $\frac{1}{2}$	17 $\frac{1}{2}$

*Optional

Junior Year	F	S	F	S	F	S
Relig.	2	2	2	2	2	2
Agr. Econ. 325	4		4		4	
Agr. Econ. 326		2				2
Agr. Econ. 410		4		4		4

Statistics 221	3		3		3	
Econ. 311				3		3
Agr. Econ. 320	2		2		2	
Agr. Econ. 360		2				2*
Acctg. 332			3		3*	
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Forum assy.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Phys. sci.		3		3		3
Humanities and fine arts	2		2		2	
Electives	4	4	1	5	1	1
Total Hours	18	18	18	18	18	18
*Optional						

Senior Year

	F	S	F	S	F	S
Relig.	2	2	2	2	2	2
Agr. Econ. 425		3		3*		3
Agr. Econ. 490, 590	1	1	1	1	1	1
Agr. Econ. 525				2		
Agr. Econ. 380, 580	2	2*	2*	2	2*	2
Econ. 453				3		3
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Forum assy.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Electives	12	9	12	4	9	9
Total Hours	18	18	18	18	18	18
*Optional						

Courses

☐ **Economics 111, 112. Introduction to Economic Principles and Problems.** (3:3:0 ea.)

112. Economics and Agriculture. (3:3:0) F.S. Home Study also. (G-SS m)
Corbridge, Nelson
Basic general education course in economics with special reference to the agricultural sector of the economy.

☐ **Mathematics 112. Analytical Geometry and Calculus.** (5:5:0)

☐ **Statistics 221. Principles of Statistics.** (3:3:0)

☐ **Economics 311. Income Analysis.** (3:3:0)

☐ **Economics 312. Price Analysis.** (3:3:0)

320. Agricultural Business Organizations and Principles of Management. (2:2:0)
F. (m) Prerequisite: Agr. Econ. 101. Corbridge

Organizational structure, problems, and relative importance of the types of business units with which agriculture is concerned, and planning the organization and operation of the business.

325. Farm and Ranch Management. (4:3:3) F.S. (m) Prerequisite: Agr. Econ. 101. Corbridge

Principles of farm management, including basic economic principles of optimum resource combination, farm records useful for income tax and farm management purposes, and budgeting procedures.

326. Farm Management Programming. (2:2:0) S. (m) Staff
Application of electronic computers to the maintenance and analysis of farm-ranch production and financial records, with special emphasis on linear programming as an aid in determining maximum profit combinations of resources and enterprises.

☐ **Accounting 332. Advanced Mathematics of Business.** (3:5:0)

☐ **Statistics 336. Statistical Methods Used in Sciences I.** (3:3:0)

□Statistics 337. Statistical Methods Used in Sciences II. (3:3:0)

350. **Land and Range Economics.** (3:3:0) F. (m) Nelson
Analysis of economic problems related to land use, evaluation, conservation, ownership, and land management.

360. **Law and the Farmer.** (2:2:0) S. Home Study also. (m) Staff
A general study of the law of contracts, real and personal property, taxes, water, and estate planning, with specific applications to the problems of agriculture.

380. **Agricultural Policy.** (2:2:0) F. (m) Staff
A study of the basic economic principles useful in evaluating farm policy, the agricultural setting, objectives of agricultural policy, and the means of achieving desired policy objectives.

410. **Agricultural Marketing.** (4:4:0) F.S. (m) Nelson
Economic principles and their application to the marketing of major agricultural products.

425. **Farm Appraisal and Finance.** (3:3:0) S. (m) Corbridge
Training in farm appraisal for purpose of purchase, finance, and taxing. An evaluation of the principal sources of farm finance.

490. **Seminar.** (1:1:0) F. (m) Staff

□Economics 512. Theory of Price. (3:3:0)

525. **Production Economics.** (2:2:0) S. (m) Prerequisite: Econ. 346. Staff
Principles concerning the optimum combination of productive resources within the farm firm and between firms.

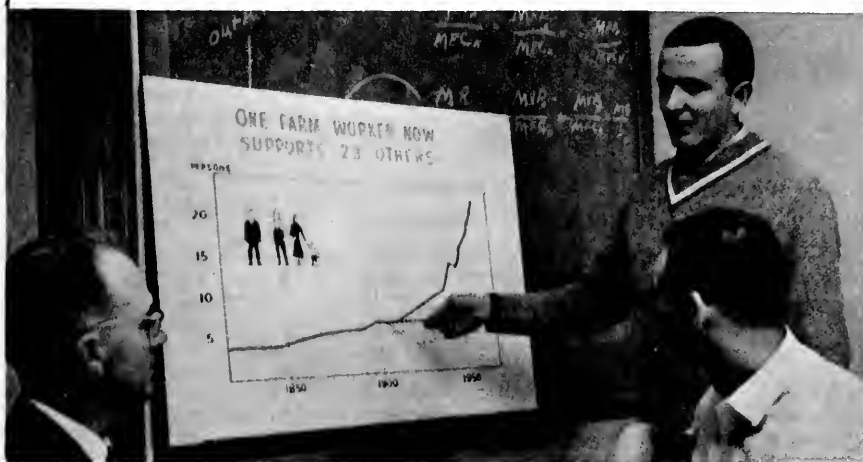
□Statistics 531. Experimental Design. (2:2:0)

580. **Advanced Agricultural Policy.** (2:2:0) F. (m) Staff
The theoretical and institutional setting of the agricultural industry, the objectives of farm policy, and the means of achieving these objectives.

590. **Seminar.** (1:1:0) S. (m) Staff

595. **Individual Readings.** (1-3:Arr.:Arr.) F.S. Staff

597. **Individual Research.** (1-3:Arr.:Arr.) Staff



Student pointing out chart in agricultural economics seminar

Agricultural Education

Professor: Walker (coordinator, 106 HGB).



Students who wish to prepare for teaching agriculture should follow the curriculum outlined below. In addition, they should meet the requirements outlined under the General Education Program and also the requirements for teacher certification as outlined under the College of Education.

Students who wish to be certified for teaching vocational agriculture will find it necessary to complete certain courses in the methods of teaching vocational agriculture which are given only at land-grant colleges and state universities.

Curriculum in Agricultural Education

Agricultural Education (Composite major—62 credit hours)

Plant Sciences		20 hours
Agron. 151, 282	8 hours	
Hort. 101, 103, 312, or 350	6 hours	
Electives—Agron. 302, 305, 308, 340, 351, 455; Hort. 340, 402, 471; Bot. 462. Choose	6 hours	
	<u>20 hours</u>	
Animal Sciences		15 hours
An. Sci. 153, 207	6 hours	
Electives (any animal science course)	9 hours	
	<u>15 hours</u>	
Agricultural Economics		11 hours
Agr. Econ. 112, 325, 410		
Farm Mechanics (select 16 hours from the following courses)		16 hours
Indus. Ed.		
125—Electrical Welding	2 hours	
188—Farm Machinery	3 hours	
189—Gas and Diesel Engines	3 hours	
210—Carpentry Framing	3 hours	
218—Plumbing	2 hours	
317—Masonry	2 hours	
341—House Wiring	2 hours	
Drawing 111	3 hours	
	<u>Total</u>	<u>62 hours</u>

Courses

- 101. The Agricultural Industry.** (1:1:0) F. Walker
The agricultural industry in the United States and other countries. Career opportunities and the role of education, research, and extension in agricultural development.
- 391. Junior Seminar.** (1:1:0) F. Walker
- 401. Extension Work in Agriculture.** (3:3:0) S. Walker
Extension work in agriculture, its development, objectives, organization, programming, leadership development, and methods of instruction with adults and boys and girls.

Agronomy

Professors: Farnsworth (chairman, 173 B),
Laws, Walker.

**Associate
Professors:** Allred, Ashton.



The purpose of the Department of Agronomy is to teach students, within the framework of the objectives of the University, the fundamental principles of soil science, field crop production, and their interrelationships. Graduates may prepare to pursue the following activities: (1) practical scientific farming, (2) graduate study toward the M.S. or Ph.D. degrees—opportunity in this area is unlimited, (3) government civil service (soil conservation, land management, etc.), (4) agronomist with commercial and industrial companies, and (5) agricultural education.

A minimum of twenty-four hours of course work and two hours of seminar (required of all seniors) is necessary for a major in this department. No "D" credit in agronomy may be counted toward the fulfillment of this requirement. A minimum of fourteen hours in a related field is required for a minor. The minor selected must have the approval of the department chairman.

A minimum of one year of chemistry is required of all students majoring in agronomy, and students planning to pursue activities other than practical scientific farming should plan on more than one year of chemistry. Transfer students majoring in this department, in addition to the above, are required to have at least sixteen credit hours in agronomy from Brigham Young University. Transfer students who minor in this department should earn a minimum of seven hours in agronomy at Brigham Young University.

Recommended Course of Study for Freshman and Sophomore Years

A student may begin his preparation by selecting either Option A or Option B.

Students electing Option A may qualify for graduate study or technical positions in government civil service and in commercial agriculture.

Students choosing Option B may qualify for less technical positions in government civil service and in commercial agriculture or for practical scientific farming.

Freshman Year		Option A		Sophomore Year	
	F	S		F	S
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Relig. 121, 122	2	2	Relig.	2	2
Health 130		2	Chem. 106, 223	4	3
Eng. 111, 112	3	3	Math. 112, 213	5	5
Math. 105*, 106	3	3	Agron. 282	4	
Bot. 101	3		Agr. Econ. 112	3	
Chem. 105		4	Hist. 170		3
Agron. 151	4		Bact. 121		3
Total Hours	15 $\frac{1}{2}$	14 $\frac{1}{2}$	Total Hours	18 $\frac{1}{2}$	16 $\frac{1}{2}$

*If a student has insufficient background in mathematics, he should take Math. 101 before registering for Math. 105.

Option B

Freshman Year		Sophomore Year		
	F	S	F	S
Phys. ed.	1½	1½	Phys. ed.	1½
Relig. 121, 122	2	2	Relig.	2
Eng. 111, 112	3	3	Hist. 170	3
Health 130		2	Chem. 151 or 106	4
Math. 105*	3		Agron. 282	4
Bot. 101 or Zool. 105	3		Hort. 101 or 103	3
Agron. 151	4		Dram. Arts 121	3
Chem. 101 or 105		4	Geog. 231	3
Agr. Econ. 112		3	Statistics 221	2
An. Sci. 207		3	Bact. 121	3
			Lit.	3
			Electives	0-2
Total Hours	15½	17½	Total Hours	16½ 16½-18½

*If a student has insufficient background in mathematics, he should register for Math. 101 before taking Math. 105.

Students planning for a graduate program (which greatly enhances opportunity for employment) should minor in mathematics, chemistry, physics, or botany.

Students primarily interested in government civil service or commercial agriculture may minor in agricultural economics, animal science, botany, or chemistry.

Students with an opportunity to return to the farm may minor in agricultural economics, animal science, botany, horticulture, or industrial education.

Courses

151. **Principles of Field Crop Production.** (4:3:2) F.S. (m) Allred
Crop production principles, soil-plant relationships, classification and distribution of farm crops, corn and small grain improvement, tillage, and crop rotations.
282. **General Soils.** (4:3:3) F.S. (m) Recommended: high school chemistry or one semester of college chemistry. Farnsworth
An introductory course dealing with the physical, chemical, and microbiological properties of soils.
302. **Irrigation and Drainage.** (3:2:3) S. (m) Prerequisites: Agron. 282, Math. 101 or 105. Farnsworth
Proper use of irrigation waters; irrigation water supply; water measurements; drainage in relation to the irrigation practices; drainage and alkali; drainage systems.
303. **Soil Genesis, Classification, and Survey.** (2:2:2) F. (m) Prerequisites: Agron. 282; recommended: Geol. 111. Woodward
Influence of geologic forces and climatic environment on soil development; classification of soils based upon soil profile characteristics. Methods of soil survey are emphasized.
305. **Soil Fertility.** (4:3:3) F. Home Study also. (m) Prerequisites: Agron. 282, Chem. 101, 105, or 111. Laws
Principles of soil fertility, soil alkali, soil chemical analysis or soil testing, commercial fertilizers, farm manures, green manures, crop rotations.
308. **Soil and Water Conservation.** (2:2:0) F. Home Study also. (m) Farnsworth
History and status of soil erosion and soil fertility; effect of climatic factors, soil characteristics, vegetation, land management, and farm operations on soil and water conservation and on the maintenance of soil fertility and productivity.
340. **Forage Crops.** (3:2:2) F. (m) Recommended: Agron. 151. Allred
Distribution, characteristics, identification, and establishment of all major forages adapted to grasslands of the U.S.

- 351. Principles of Weed Control.** (3:3:2) S. (m) Recommended: Agron. 151, 282. Allred
Cultural, chemical, and biological methods of weed control.
- 411. Soil Physics.** (3:2:3) S. (m) Prerequisites: Agron. 282, Chem. 105, and Math 101 or 105; recommended: Physics 211, 212, 213, 214; Chem. 106 and 223. Laws
Physical composition of soils—sand, silt, clay, and organic matter—and their effects upon the air, water, and temperature relationships in the soil.
- 414. Soil Microbiology.** (3:2:3) S. (m) Prerequisites: Bact. 121, Agron. 282. Farnsworth
Designed to acquaint the student with bacteria in relation to soil fertility; the activity and types of organisms in the rhizosphere; the biological processes in the soil.
- 453. Advanced Field Crops and Seed Production.** (3:3:0) F. (m) Prerequisites: Agron. 151, 282. Allred
Problems involved in seed crop production; seed certification of small grains and forages; curing, storing, cleaning, and distribution of seed.
- 455. Pasturage Management.** (2:2:0) S. (m) Prerequisites: Agron. 282, 340. Laws
Analysis of the conditions of pastures in the intermountain region, need for improvement, factors involved in improvement; principles and practices of management required to provide maximum production for dairy, beef, sheep, hogs, and poultry.
- 457. Ecology of Weeds and Crops.** (2:2:0) Su. (m) Allred
Field study of important grasses, legumes, other agronomic crops, and weeds; adaptation to soil, moisture, light, and other environmental conditions; growth characteristics, utilization, and control.
- 459. Plant Breeding.** (2:2:0) S (m) Prerequisites: Bot. 101, Zool. 276. Ashton
Methods of hybridizing and selection in relation to plant improvement.
- 460. Soil and Plant Analysis.** (2:0:6) F. Prerequisites: Agron. 305, Chem. 223. Laws
Laboratory chemical analysis of soils and plant materials in soil fertility research.
- 491. Seminar.** (1:1:0) F.S.Su. (m) Staff
Current agronomic literature. Agricultural problems. Two semesters required of all senior students majoring in agronomy.
- 495. Field Projects.** (2-3:0:4-6) F.S.Su. Staff
Supervised field research and practical field problems.
- 497. Research to Special Problems.** (1-2:1-2:0) F.S. Staff
Seniors specializing in agronomy elect research work from one to two hours during senior year.
- 498. Agricultural Literature to Agronomy Conference.** (1-2:1-2:0) F.S.Su. Staff
- 605. Chemistry of Soil-Plant Relationships.** (4:3:3) S. Laws
- 607. Soil Physical Conditions.** (3:2:3) F. Laws
- 614. Advanced Soil Microbiology.** (3:2:3) F. Farnsworth
Prerequisites: Agron. 305, Bact. 121, Chem. 223.
- 659. Advanced Plant Breeding.** (2:2:0) S. Allred
- 694. Seminar.** (1:1:0) F.S.Su. Staff
- 697. Research.** (Arr.) F.S.Su. Staff
- 698. Agricultural Literature.** (Arr.) F.S.Su. Staff
- 699. Thesis for Master's Degree.** (1-6:Arr.Arr.) F.S.Su. Staff

Air Science



Professor: Lt. Colonel McCulloch (chairman,
7 ROTC Bldg.)

**Assistant
Professors:** Major Canfield, Major Nix, Major
Sharp, Captain Hastings.

Instructors: T/Sgt. Nickell, T/Sgt. Winder,
S/Sgt. Hall, A/1C. Burton.

General Information. AFROTC is voluntary at B.Y.U.; the cadet assumes no obligation until his junior year. The program trains him to function as a junior executive. The cadet specializes in the major field of his choice. The air science courses supplement his academic major and are designed to teach principles and techniques of leadership and management in preparation for service as a commissioned officer in the air force and as a leader in civic and community affairs.

Eligibility. The beginning student must be a citizen of the United States and able to graduate from the program and the University by his 28th birthday. Physical and academic standards for the basic course (freshman and sophomore) are the same as those of the University. To qualify for the advanced program the cadet must pass a mental and physical examination during the sophomore year. On approval of the University President he executes an agreement to complete the last two years of AFROTC, attend four weeks summer training, and serve a tour of active duty with the air force upon graduation.

Enrollment. AFROTC should be completed at the time of or shortly before graduation. Therefore, a student normally enrolls in AFROTC during his first or second semesters at B.Y.U. Exceptions are made for veterans, transfer students, and certain other students. Students with enrollment problems should consult the Air Science Department chairman.

Minor in Air Science. An academic minor in air science has been approved. Students desiring air science as a minor must complete the AFROTC requirements and qualify for a commission in the United States Air Force. See the Air Science Department chairman for detailed information.

Text Books, Uniforms, and Allowance. All items of the air force uniform and AFROTC text books are issued free of charge. During the last two years of AFROTC each cadet receives from the air force a monetary allowance of 90 cents per day or about \$620 for these two years.

Summer Training. The four week Summer Training Unit is a supplement to the academic program. It develops in the cadet a better understanding of the air force mission and its operation. He receives additional practical experience in leadership in realistic situations on an air force base. The course emphasizes flying for those physically qualified. Each cadet receives medical care, food, and clothing while attending the course and is paid \$75.00 in addition to travel pay to and from the base.

Flight Instruction Program. A flight instruction program is conducted at the Provo Airport by an accredited flying school. Senior cadets who qualify for pilot training are eligible to participate. Thirty-six and one-half hours of flying instruction are given, qualifying the student for a private pilot's license. Ground school instruction in navigation, weather, flight rules, and other subjects is given by USAF flying officers assigned to the Department of Air Science.

Orientation Flights. A series of orientation flights in air force aircraft is scheduled each year. Each cadet will have the opportunity of visiting air force

bases and aircraft assembly plants. These flights, as well as those flights in jet aircraft at the Summer Training Unit, are flown by experienced air force pilots.

Extracurricular Activities. Each AFROTC cadet will be able to extend his academic and laboratory associations into many extracurricular activities. Among these activities are the Arnold Air Society, drill teams, the AFROTC Chorus, the AFROTC Band, rifle teams, and the annual Military Ball for all cadets. Cadet associations and friendships formed during this period continue long after college.

L.D.S. Missions. Students called on L.D.S. missions will be released from the AFROTC program. Special arrangements have been made with the Air Force to accept each back into the program if he meets the conditions in force at the time of return.

Period of Nonattendance. Students enrolling in AFROTC who are in a five-year program are allowed a year of nonattendance between the basic and advanced courses. During this period cadets remain deferred from the draft. They must, however, participate in leadership laboratory.

The Draft. Students enrolled in the AFROTC program may be deferred from the draft after they have completed one semester of air science.

Discipline. AFROTC cadets are civilians and are not subject to military law. Disciplinary training in the Cadet Corps is formulated and administered by the cadets themselves. Cadets are subject to the rules and regulations of the Department of Air Science and of the University. Violation of rules may mean discharge from the AFROTC program but will not necessarily result in a student having to leave school.

Veterans. One of the reasons the University sought the AFROTC program was to offer students, including veterans, an opportunity to improve their status in the military reserve. A veteran seeking a commission through AFROTC may have that part of the basic program waived (maximum is both freshman and sophomore years) which corresponds with the academic credit on his record. He should have at least four semesters remaining prior to graduation, which must be before his 28th birthday. Active service after graduation is voluntary. Interested veterans should consult the professor of air science. Allowances are paid in addition to GI Bill benefits.

Course Fee Deposit. A \$14.00 deposit is required of the student at the beginning of each school year. The purpose of this fee is to protect the government and the University from loss of textbooks and uniforms and to cover insurance and activities. At the end of each school year approximately \$6.00 is returned to the student, providing there has been no loss of uniform or books.

The Program

The AFROTC program is normally a four-year program designed to fit into the regular academic schedule of the University. It consists of summer training, leadership laboratory, and academic classes. In keeping with the changing need for professional officer education, the course material for sophomores and juniors has been updated, and revised courses will be taught beginning academic year 1964-65. Revision of course material for freshmen and seniors will be completed in time for revised courses to be taught beginning academic year 1965-66.

Leadership laboratory is required of each student during his eight semesters of enrollment in the program. This is a regular part of the curriculum whether enrolled directly in academic courses of the department or in approved alternate courses in other departments.

The academic program consists of some classes given by this department and some alternates given by other departments with the approval of the professor of air science. All academic work counts toward graduation requirements.

The following courses have been selected to allow the cadet a choice of alternates: Econ. 101; Geog. 120, 231; Hist. 111, 121; Commun. 101 (Journ.); Physics 100, 127, 128, 137; Pol. Sci. 110, 112. A cadet will take one the second semester of the freshman year and one the first semester of the sophomore year. Note that this will fill both AFROTC requirements for two semesters and a portion of the general education requirements. Other courses will be

approved on an individual basis for honor students, engineering majors, and cadets with scheduling problems.

The following program is recommended for the four-year student; others should consult the department chairman.

Freshman Year			Junior Year		
	F	S		F	S
Air Sci. 110, 111	$\frac{1}{2}$	$\frac{1}{2}$	Air Sci. 330, 331	$\frac{1}{2}$	$\frac{1}{2}$
Alternate course		2	Air Sci. 310, 311	3	3
Acad. Yr. 1964-65			Regular program	13 $\frac{1}{2}$ -15 $\frac{1}{2}$	13 $\frac{1}{2}$ -15 $\frac{1}{2}$
Air Sci. 101	2		Total Hours	17-19	17-19
Acad. Yr. 1965-66					
Air Sci. 120	2		Senior Year		
Regular program	14 $\frac{1}{2}$ -15 $\frac{1}{2}$	14 $\frac{1}{2}$ -15 $\frac{1}{2}$		F	S
Total Hours	17-18	17-18	Air. Sci. 440, 441	$\frac{1}{2}$	$\frac{1}{2}$
Sophomore Year			Acad. Yr. 1964-65		
	F	S	Air Sci. 401, 402	1	1
Air Sci. 220, 221	$\frac{1}{2}$	$\frac{1}{2}$	Pol. Sci. 115	3	
Air. Sci. 210		2	Geog. 441		3
Alternate course	2		Acad. Yr. 1965-66		
Regular program	13 $\frac{1}{2}$ -15 $\frac{1}{2}$	13 $\frac{1}{2}$ -15 $\frac{1}{2}$	Air Sci. 410, 411	3	3
Total Hours	16-18	16-18	Regular program	13 $\frac{1}{2}$ -15 $\frac{1}{2}$	13 $\frac{1}{2}$ -15 $\frac{1}{2}$
			Total Hours	17-19	17-19

Courses

101. (Air Science 1). Foundations of Air Power. (2:2:0) F. Staff
Freshman year: A general survey of air power, evolution of aerial warfare, major ideological conflicts, requirement for military forces in being, responsibilities of citizenship. (This course will be taught for the last time Fall Semester, 1964-65, to thereafter be replaced by Air Sci. 120.)

110, 111. Leadership Laboratory—Freshmen. ($\frac{1}{2}$:0:2 ea.) F.S. Staff
A practical learning situation teaching basic fundamentals of military drill, self-discipline, military courtesy, military organization, and various skills required at increasing levels of responsibility.

*☐ **Political Science 115. (Air Science 4). International Relations. (3:3:0) F.** Staff
Senior year: A study of major factors underlying international tensions. Pol. Sci. 370 is also acceptable to satisfy this requirement.

120. (Air Science 1). Defense of the United States. (2:2:0) F. Staff
Freshman year: Effect of present world conflict on security of the United States, analysis of democracy and communism, U.S. power position in world affairs, functions of USAF. (This course will replace Air Sci. 101 beginning Acad. Yr. 1965-66.)

210. (Air Science 2). World Military Systems. (2:2:0) S. Staff
Sophomore year: Comparative study of world military forces to include free world and Communist air, land, and naval forces together with development and employment of military power.

220, 221. Leadership Laboratory—Sophomores. ($\frac{1}{2}$:0:2 ea.) F.S. Staff

310. (Air Science 3). Growth and Development of Aerospace Power. (3:3:0) F. Staff
Junior year: The Air Force today—how it evolved. Includes nature of military conflict; development of aerospace power; and doctrine, mission, organization, and employment of aerospace forces.

311. (Air Science 3). Growth and Development of Aerospace Power. (3:3:0) S. Staff
Junior year: Current aerospace developments and their future implications. Includes discussion of national space effort, space vehicle systems and associated problems, and current and planned space operations.

- 330, 331. Leadership Laboratory—Juniors. ($\frac{1}{2}$:0:2 ea.) F.S. Staff
401. (Air Science 4). Weather and Navigation. (1:2:0) F. Staff
Senior year: A study of weather and navigational aspects of airmanship and maps and charts. (This course will not be taught after Acad. Yr. 1964-65.)
402. (Air Science 4). The Air Force Officer. (1:2:0) S. Staff
Senior year: A study of materials to help the cadet make a rapid, effective adjustment to active duty as an officer of the United States Air Force. (This course will not be taught after Acad. Yr. 1964-65.)
410. (Air Science 4). The Professional Officer. (3:3:0) F. Staff
Senior year: Study of professionalism, leadership, and management. Includes professional responsibilities, leadership theory, management principles and function, problem solving, management tools and practices, and military justice system. (This course will be taught beginning Acad. Yr. 1965-66.)
411. (Air Science 4). The Professional Officer. (3:3:0) S. Staff
Senior year: Study of professionalism, leadership and management. Includes professional responsibilities, leadership theory, management principles and function, problem solving, management tools and practices and military justice system. (This course will be taught beginning Acad. Yr. 1965-66.)
- 440, 441. Leadership Laboratory—Seniors. ($\frac{1}{2}$:0:2 ea.) F.S. Staff
- *☐ Geography 441. (Air Science 4). World Political Geography. (3:3:0) S. Staff
Senior year: A study of political geography, factors of power, and the geographic influences upon political problems with a geopolitical analysis of the strategic area.

*These courses are authorized substitutes for courses formerly taught by the Department of Air Science. They contain the same subject material and must be completed prior to graduation from AFROTC or be waived in advance by the professor of air science prior to the beginning of the senior year. These courses will also be acceptable for general education requirements in the social science group. This requirement will be dropped beginning Acad. Yr. 1965-66.



AFROTC inspection

Animal Science



Professors: Shumway (chairman, 280 HGB),
Cannon, Morris.

**Associate
Professor:** Richards.

**Assistant
Professors:** Hoopes, Wallentine.

Instructors: Mikkelsen, Pace.

The Department of Animal Science offers training for the following activities: (1) practical livestock farming and operation, (2) livestock managers, (3) commercial and government agricultural positions, (4) pre-veterinary preparation, (5) preparation for study toward the M.S. and Ph.D. degrees, (6) agricultural teaching, and (7) positions in meat and food industries.

A minimum of 28 credit hours in the Animal Science Department is required of all majors. This 28-hour minimum must include the following courses: 153, 161, 207, 311, 374, 381, and 592. An. Sci. 507 or 515 may be substituted for either 161, 374, or 381. In addition, one course with variable credit must be selected from the following list: 162, 163, 171, 341, 337, 338, or 546. Any deviation from the above may be granted only after a petition has been presented to the Animal Science Department and approved. Students minoring in animal science must have 207 and either 381, 161, or 374.

Transfer students majoring in animal science must earn at least 14 credit hours in their major field at Brigham Young University. Transfer students minoring in this department must earn at least 7 hours in animal science at Brigham Young University.

Animal science majors are encouraged to take more than the required number of hours needed for graduation in both the physical and biological sciences. (See "General Education Program" in the Student Academic Services section of this catalog.)

Animal science students are required to take one or more courses from each of the following areas:

Agr. Econ. 112, 325, 410.

Agron. 151, 282.

Chem. (two semesters)

Hort. 101, 103, 310.

Students planning to return to the farm or to do professional agricultural work should fill elective courses from the following areas depending on specific interests and needs (courses shown are merely suggested):

Acctg.: 201.

Agr. Econ.: 112, 325, 326, 360, 410, 425.

Bact.: 121, 371.

Bot.: 101, 440, 450, 462, 465.

Bus. Mgt.: 420.

Bus. Ed.: 220.

Chemistry

Commun.: 211, 471.

Indus. Ed.: 110, 120, 125, 188, 189, 218, 240, 317, 341, 411.

Speech: 101, 102, 121.

Requirements for those students preparing for a pre-veterinary program are listed under the College of Biological and Agricultural Sciences in this catalog.

Students planning to do graduate work should elect from the following courses:

Statistics 221, 336, 337, 531.
 Bact. 121, 331, 371, 501.
 Bot. 101, 376, 501.
 Chem. 105, 106, 223, 351, 352, 384, 385.
 Math. 105, 106.
 Zool. 212, 213, 370, 373, 376, 417, 465.

The schedule shown below is a suggested outline for animal science majors:

Freshman Year			Sophomore Year		
	F	S		F	S
Eng. 111, 112	3	3	Relig.	2	2
Relig.	2	2	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	An. Sci. 161	4	
An. Sci. 153, 207	3	3	An. Sci. 120 or 208		2
Bot. 101	3		Zool. 105 or 212	3 or 4	
Agron. 151		4	Agron. 282		3
Agr. econ.	3		Chem. 101, 151	5	5
Math. 101		3	Commun. 211	2	
Hort. 101 or 103	3		Speech 102		3
Health 130		2			
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	16 $\frac{1}{2}$ -17 $\frac{1}{2}$	15 $\frac{1}{2}$

Courses

- 102x. History of Breeds of Livestock.** (3) Home Study only. Richards
 Not to apply on major.
- 120. Livestock Judging and Selection.** (2:0:4) S. (m) Shumway
 Animal types and their relation to the functions of animals.
- 153. Fundamentals of Animal Breeding.** (3:3:0) F. (m) Richards
 Principles involved in breeding animals, including physiology of reproduction, heredity and variation, and selection and systems of breeding.
- 161. Elements of Dairying.** (4:3:3) F. Home Study also. (m) Richards
 General principles of breeding, feeding, and management of dairy cattle.
- 162, 163. Dairy Science Laboratory.** (1-2:0:Arr. ea.) F.S. (m) Prerequisite: completion of or concurrent registration in An. Sci. 161. Staff
 Each student is required to feed, care, manage, and milk his own cows at the University laboratory area. Feeding, sanitation, and management are stressed.
- 171. Poultry Science Laboratory.** (1-2:0:Arr.) F.S. (m) Morris
 Project and laboratory experience in raising broilers and young stock.
- 207. Feeds and Feeding.** (3:2:3) F.S. Home Study also. (m) Morris, Shumway
 Principles of nutrition and their application to all types of livestock.
- 208. Fitting and Showing Livestock.** (2:0:6) S. (m) Richards
 Demonstrations and discussions involving preparation of each type of livestock for show. Each student is assigned animals to fit and show at one of the spring shows and the campus livestock show.
- ☐ **Statistics 221. Principles of Statistics.** (3:3:0)
- 225. Meat Identification and Preparation.** (2:1:3) F. (m) Staff
 A study of inspection, grading, identification, selection, processing, preparation and nutritive aspects of meat and poultry.

- 311. Animal Physiology and Anatomy.** (4:3:2) F. (m) Prerequisite: Zool. 105 or equivalent. Hoopes
Applied study of the construction and functions of the animal body by systems.
- 312. Animal Hygiene.** (4:3:3) S. (m) Prerequisite: An. Sci. 311; recommended: Bact. 121. Hoopes
Principles of animal sanitation in relation to disease prevention, with emphasis on the stockmen's approach to animal disease control.
- 325. Meat and Meat Products.** (3:0:6) F.S. (m) Home Study also. Wallentine
Care of the meat from slaughter to packaging, inspection of slaughtering and meat plants, processing, meat judging, and selection.
- 326. Meat Evaluation.** (1:0:3) F.Su. (m) Prerequisite: An. Sci. 325 Wallentine
A study and classification of market classes and grades, evaluation and selection of carcasses and wholesale cuts. Field trips are required.
- 328. Meat Science Laboratory.** (1-2:0:Arr.) F.S. (m) Wallentine
A study of meat product quality as related to source, preparation and handling.
- 330. Horse Husbandry.** (2:1:3) S. (m) Hoopes
A brief study of breeds of horses, with emphasis on feeding, management and selection.
- ☐ **336, 337. Statistical Methods Used in the Sciences I and II.** (3:3:0 ea.)
- 337. Beef Science Laboratory.** (1-2:0:Arr.) F.S. (m) Shumway
Each student is required to feed, manage, and care for a designated number of beef animals.
- 341. Sheep Science Laboratory.** (1-2:0:Arr.) F.S. (m) Wallentine
Each student is required to feed, manage, and care for a designated number of sheep.
- 346. Swine Science Laboratory.** (1-2:0:Arr.) F.S. (m) Shumway
Practices in the care, feeding, and management of growing and fattening swine.
- 365, 366. Milk and Milk Processing.** (3:2:2 ea.) F.S.Su. (m) Hoskisson
Modern methods of producing, grading, and processing dairy products.
- 374. The Science of Poultry Production.** (4:3:3) F. (m) Morris
Animal science as applied to present-day poultry husbandry. Special emphasis will be placed on feeding, management, environmental control and disease prevention.
- 378. Turkey Management.** (2:0:4) S. (m) Morris
Principles, practices, and problems of turkey production, including brooding, feeding, growing and marketing.
- 381. Advanced Animal Husbandry.** (4:3:3) F. (m) Staff
An advanced study of the breeding, feeding and management of meat animals.
- 420. Advanced Judging.** (2:0:6) F. (m) Prerequisite: An. Sci. 120 Shumway
Advanced work in livestock judging. The judging team is selected from this class.
- 421. Special Problems in Meat Animal Selection.** (1:0:3) F. (m) Shumway
- 436, 437. Advanced Beef Science Laboratory.** (1-2:0:Arr. ea.) F.S. (m) Shumway
Deals primarily with care, management and research with the beef breeding herd.

- 446, 447. **Advanced Swine Science Laboratory.** (1-2:0:Arr. ea.) F.S. (m) Shumway
Care, management and research with breeding herd.
- 460, 461, 462. **Dairy Plant Management and Operation.** (2:0:6 ea.) F.S.Su. Staff
Practical experience in dairy manufacturing and plant operation.
463. **Artificial Insemination.** (2:0:4) F. (m) Prerequisite: An. Sci. 153. Hoopes
Methods and techniques of artificial breeding are studied and accompanied by laboratory work.
- 464, 465. **Advanced Dairy Science Laboratory.** (1-2:0:Arr. ea.) F.S. (m) Richards
Specific instruction and responsibility are given in modern milking methods, care and handling of milk, the pregnant cow, young calf, the fresh cow, the lactating cow.
507. **Animal Nutrition.** (3:3:0) S. (m) Morris
515. **Advanced Animal Breeding.** (3:3:0) S. (m) Richards
- **Statistics 531. Experimental Design.** (2:2:0)
560. **Advanced Dairy Production.** (3:3:0) S. (m) Richards
571. **Advanced Poultry Science Laboratory.** (1-2:0:Arr.) F.S. (m) Morris
592. **Seminar.** (2:2:0) F.S. (m) Cannon
A critical review and analysis of current research, findings, and methods in animal agriculture.
601. **Experimental Animal Techniques.** (2:2:0) F.S. Cannon
660. **Advanced Livestock Management.** (2:1:3) S. Cannon
- 691A,B,C,D. **Animal Science Research.** (1-2:0:3-6 ea.) F.S. Staff
699. **Thesis for Master's Degree.** (2-6:Arr.:Arr.) F.S.Su. Staff



Students caring for animals

Archaeology



Professor: Jakeman.

Associate Professor: Christensen (chairman, 139 Maeser).

Archaeology is the science which investigates the history of man from the evidence of his actual material remains or antiquities—ruined buildings, broken implements and pottery, ancient art works, monuments and tablets bearing inscribed records, etc. By means of such evidence it is able not only to reconstruct much of the unwritten history of man but also to increase greatly our knowledge of the ancient periods of written history.

Instruction is offered in this department in both these main divisions of archaeology, i.e., the prehistoric, or that of the preliterate periods of human history and the historical, which has as its purpose the checking, clarification, and supplementation of early historical accounts (text-related archaeology such as biblical). The emphasis of the course offering is on the later division, historical archaeology.

Attention is also given to the methods of archaeological research, and provision is made for practical in-service training in field and laboratory procedures. Undergraduate students may participate in excavations at sites in Utah Valley, while graduate students may accompany University expeditions to Mexico and Central America.

It will be noted that archaeology, the investigation of man's past from the evidence of antiquities (in conjunction with written records when possible), is one of the historical sciences—the companion of history or the investigation of man's past exclusively from the evidence of written records (i.e., documentary history). It is also, like history, one of the humanities. Its historical data and reconstructions, however,—particularly those relating to the unwritten or prehistoric periods of human history—are extensively used by the physical and social science of anthropology, while many of the data and concepts of anthropology in turn are used by archaeology. The student majoring in archaeology should, therefore, decide as soon as possible upon his division of specialization, i.e., whether this is to be historical archaeology (in which case he should minor in history, with emphasis on ancient history) or prehistoric archaeology (in which case he should minor in anthropology, with emphasis on cultural anthropology).

An **undergraduate major** in this department, leading to the Bachelor of Arts degree, may be obtained by completing twenty-four semester hours in archaeology, including courses 200 and 310. The minor or collateral subject to accompany a major in archaeology must be either history (including Hist. 110 and 388) or anthropology (including Anthrop. 101 and 480). Actually a minor in both these subjects, or in one of them and another in geology, geography, art, or a foreign language, will provide the best collateral training for work in archaeology.

An **undergraduate minor** in this department requires the completion of fourteen semester hours in archaeology, including course 200.

The **graduate major** and minor are also offered. The graduate major, leading to the Master of Arts degree, further prepares the student for professional work in archaeology, such as teaching or research and writing. The following courses in the department are required, unless previously taken for undergraduate credit: 551, 571, 690, and 695 or 696. A thesis is also required, which may be either a field report or an interpretative study and must be of professional caliber.

Admission as a graduate major in archaeology ordinarily requires the previous completion of an undergraduate major in this subject. Students desiring admission will be examined by the department. If admitted, the student may be required to take additional undergraduate courses which the department considers necessary to complete his background.

The candidate for the master's degree in archaeology must present a reading knowledge of French, German, or Spanish. However, another language may be substituted in fulfillment of this requirement if its pertinency to the field of his thesis is shown. A reading knowledge also of Hebrew, Greek, or Latin is recommended if the candidate's field of specialization is to be historical archaeology.

In this department courses not offered one year are ordinarily given the following year.

It is recommended that Archaeol. 200 be taken prior to any other course in the department.

Courses

200. Introduction to Archaeology. (3:3:0) F.S. (G-HA m) Staff

The aims, methods, main fields, and principal discoveries of archaeology; and a survey of the antiquities and ancient arts of both the Old and New Worlds.

250. World Archaeological History. (4:4:0) S. (m) Staff

The early history of man in both hemispheres, as revealed by archaeology, with special attention to primitive and ancient technology.

☐ **History 300. Early Oriental History.** (2:2:0)

310. Archaeology and the Scriptures. (4:4:0) F. (m) Prerequisite: Archaeol. 200; recommended: Archaeol. 250 and Hist. 300. Christensen, Jakeman

A basic course in historic text-related archaeology: the early historical narratives in the Hebrew-Christian and Latter-day Saint scriptures, intensively examined in the light of archaeology.

327. Old World Archaeology: Prehistoric. (2:2:0) F. (m) Prerequisite: Archaeol. 250. Christensen

A further study in the archaeological history of the eastern hemisphere, with special attention to the late prehistoric civilizations (predynastic Mesopotamian and Egyptian, Indus Valley, Aegean, etc.).

380. Old World Archaeology: Historic (3:3:0) S. (G-HA m) Prerequisite: Archaeol. 310. Jakeman

A further study in historical archaeology, oriental and classical: the major excavations throwing light on the ancient historic civilizations (Mesopotamian, Egyptian, Persian, Graeco-Roman, Indian, Chinese).

☐ **Art 403. Ancient and Primitive Art.** (2:2:0)

☐ **Art 404. Oriental Art.** (2:2:0)

440. Archaeology and Early History of Middle America. (3:2:2) F. (m) Prerequisite: Archaeol. 310. Jakeman

Recent excavations and research in the Indian and Spanish chronicles, throwing light on the origins and history of the ancient peoples of Mexico and Central America.

465. Archaeology of South America. (2:2:0) S. (m) Christensen

Results of archaeological research in South America, especially as to the ancient civilizations and traditional history of the Andean region.

475. Archaeology of North America. (2:2:0) S. (m) Christensen

Results of archaeological research in North America north of central Mexico, especially as to the later prehistory of the Southwest and eastern United States.

The following courses are designed for advanced students in archaeology planning a professional career in this science with specialization in one of the two fields bearing upon the fundamental problem of the origin of civilization in the Old and New World, i.e. Near Eastern, Biblical and Middle American-Andean.

500. **History and Theory of Archaeology.** (2:2:0) F. (m) Christensen
The development of archaeology as a science, and the theoretical foundations upon which this discipline has been built.
551. **Methods of Archaeological Research: General and Field.** (4:0-2:4-8) F. (m) Christensen
The steps in an archaeological research project, and training in field methods, including student participation in the excavation of a site in Utah Valley.
571. **Methods of Archaeological Research: Interpretative.** (2:2:0) S. (m) Pre-requisite: Archaeol. 551. Jakeman
Interpretation of empiric archaeological data as to culture units; methods of chronological interpretation; and practice in archaeological ethnography and historiography.
590. **Recent Developments in Archaeology.** (2:1:4) S. (m) Jakeman
Includes an individual report on recent work in a field of the student's choice.
631. **Introduction to the Reading of Maya and Aztec Hieroglyphics.** (3:1:6) F. Jakeman
641. **Museum Methods and Teaching of Archaeology.** (3:1:6) F. Prerequisite: an undergraduate minor in archaeology. Staff
In-service training in archaeological museum methods and the teaching of archaeology.
651. **Advanced Field Methods of Archaeology.** (5:0:15) S. or Su. Staff
Further in-service training in field methods as a member of an archaeological expedition to Middle America or the Near East.
690. **Seminar in Historical Archaeology.** (2:2:0) S. Must be taken concurrently with either Archaeol. 695 or 696 or both. Jakeman
695. **Library Research in Near Eastern Archaeology.** (2:0:6) S. May only be taken concurrently with Archaeol. 690. Christensen, Jakeman
Independent library research in oriental or biblical archaeology (Mesopotamian, Egyptian, Palestinian, Old Testament, or other Near Eastern field).
696. **Library Research in Middle American-Andean Archaeology.** (2:0:6) S. May only be taken concurrently with Archaeol. 690. Christensen, Jakeman
Independent library research in Middle American or Andean archaeology (Mesoamerican or Peruvian archaeological and chronicled history, Mesoamerican hieroglyphic decipherment, or origins of the Middle American-Andean civilizations).
697. **Field Research.** (5-10:0:15-30) S. Prerequisite: Archaeol. 651 (may be taken concurrently). Staff
Independent field research in western United States, Middle America, or the Near East.
699. **Thesis for Master's Degree.** (1-6:0:15) S.Su. Staff

Art



Professors: Andrus, de Jong, Larsen, Mathews.

Associate

Professors: Gunn (chairman, C502 FAC), Turner, Weaver, Wilson.

Assistant

Professors: Breinholt, Burnside, Darais, Johansen.

Instructor: Magleby, Takasaki.

Special

Instructors: Luch, Taylor.

The programs leading to a major in art are planned for those who desire to pursue a general art course or to prepare for careers in art education, commercial art, interior design, painting, printmaking, sculpture, ceramics or art crafts.

The Art Department offers five degrees: Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, Master of Arts, and Master of Fine Arts. Graduate degrees are detailed in the Graduate Catalog.

Bachelor of Arts

A liberal arts degree is offered to students with twelve hours in a foreign language. (Students graduating under the old requirements must complete sixteen hours.) The B.A. candidate must complete the General Education requirements, six hours of art history, the core art requirements listed below, and twenty-two hours of upper division work in an area of concentration selected from the departmental listing.

Bachelor of Science

A liberal arts degree is offered to students who complete the additional nine hours of science selected from the list under "Graduation Requirements" in this catalog. The B.S. candidate must complete the General Education requirements, five hours of art history, the core art requirements listed below, and twenty-two hours of upper division work in an area of concentration selected from the departmental listing.

Bachelor of Fine Arts

A professional degree is offered to students who successfully pass a faculty interview and portfolio review of the candidate's work. A candidate's progress will be reviewed by the art faculty at the end of each year of the program. A B.F.A. student may return to a B.A. or B.S. degree if he wishes. During the final year of the program the student will complete a terminal project which may be retained by the department. The project will be reviewed by the art faculty, and, if acceptable, the candidate will be recommended for the B.F.A. degree.

B.F.A. candidates must complete the requirements detailed on the Program Planning Guide available at the Art Department.

Art Minor

Students electing an art minor (nonteaching) must complete fourteen hours in art with at least four hours of upper division work.

Art Education

Prospective art teachers are majors in the Art Department under the College of Fine Arts; but to coordinate with the Teacher Education Program, all departments list their department offerings with the College of Education. Details for

credentials and Art Department requirements are, therefore, listed under teacher education.

Students who intend to teach on the secondary level may fill an art major designed for teachers and support this with a teaching minor in another department. A composite teaching major in art is also offered. The three areas from which the dominant and two supporting fields may be chosen are (1) crafts and sculpture, (2) drawing and painting, and (3) commercial art and interior design. A teaching minor in art is also offered.

The sequence of education courses begins with Tchr. Ed. 301 in the second semester of the sophomore year. For details on these programs and for sequence of courses in education see "Preparation of Secondary School Teachers" in the Teacher Education section of this catalog (teacher education).

University Minor for Art Majors

Art majors are required to take at least fourteen hours in a minor field in another department. Art education students who elect a composite teaching major are not required to have a University minor. However, should the student decide to complete his bachelor's degree before taking out his credentials, the composite teaching major will not meet the University minor requirements.

Art Core Requirements

Lower division requirements for the major in art include drawing (121 and 122) and design (120). These fundamentals are combined with various media for a basic core required of all students (227, 233, 239, 250, 256, and 263). All programs begin with Art 120 and 121 followed by Art 122. The core classes may be taken concurrently with the drawing and design requirements.

Areas of Concentration for B.A. and B.S. Programs

Commercial Art

Lower Division		Upper Division	
Requirements	Hours	Requirements	Hours
Art 120	3	Art 306	3
Art 121	3	Art 310	2
Art 122	3	Art 341	3
Art 227	2	Art 342 or 343	2
Art 233	2	Art 405 (B.S. elective)	3
Art 239	2	Art 447 or 448	2
Art 250	2	Art 444 or 446	3
Art 256 or 263	2	Art elective	2
Typography or advertising	2		

Interior Design

Lower Division		Upper Division	
Requirements	Hours	Requirements	Hours
Art 120	3	Art history	6
Art 121	3	Art 310	2
Art 122	3	Art 314	2
*Art 233	2	Art 333 or 335	2
*Art 239 or 263	2	Art 362	2
*Art 250 or 256	2	Art 414A	3
		Art 414B	3
		Art 415	3
		Art 417	3
		Art elective	2

Painting

Lower Division		Upper Division	
Requirements	Hours	Requirements	Hours
Art 120	3	Art history	6
Art 121	3	Art 310	2
Art 122	3	Art 321 or 322	2
Art 227	2	Art 327 or 329	2
Art 233	2	Art 333 or 335	2
Art 239	2	Art 474 or 476	2
Art 250	2	Art 580 or 582	2
Art 256	2	Painting electives	4
Art 263	2		

Printmaking and Painting

Lower Division		Upper Division	
Requirements	Hours	Requirements	Hours
Art 120	3	Art history	6
Art 121	3	Art 310	2
Art 122	3	Art 314	2
Art 227	2	Art 322	2
Art 233	2	Art 327 or 329	2
Art 239	2	Art 333 or 335	2
Art 250	2	Art 350	2
Art 256	2	Art 352	2
Art 263	2	Art 474 or 476	2

Sculpture and Ceramics

Lower Division		Upper Division	
Requirements	Hours	Requirements	Hours
Art 120	3	Art history	6
Art 121	3	Art 310	2
Art 122	3	Art 321 or 322	2
Art 227	2	Art 350 or 352	2
Art 233	2	Art 356	2
Art 239	2	Art 358	2
Art 250	2	Art 359	2
Art 256	2	Art 361	2
Art 263	2	Art 366	2

Areas of Concentration for B.F.A. Program

The following areas are offered to the B.F.A. candidate: ceramics, commercial art, crafts, interior design, painting, printmaking, and sculpture. A supplement to this catalog is available in the Art Department which details the requirements for each area. The B.F.A. student will take a larger percentage of his college program in art subjects.

Courses

- 101. Introduction to Art.** (2:2:0) F.S. (G-HA) Takasaki, Turner
A survey of art appreciation. Introduction to basic understanding in art with emphasis on art processes through lectures, demonstrations, and studio and gallery visits. (Not for art majors.)
- 108. General Art.** (2:2:2) F.S.Su. (G-HA) Staff
Introduction to appreciation and creative expression. Lectures, demonstrations, and exploratory experiences in painting, lettering, crafts, printmaking, and modeling. Offered to meet the needs of students filling general education requirements who wish to participate in art activities. (Not for art majors.)
- 110. Design in Everyday Life.** (2:3:0) F.S. (G-HA) Staff
A study of good taste and sensitivity to design in contemporary life. (Not for art majors.)

- 120. Basic Design.** (3:3:3) F.S.Su. (m) Darais, Staff
Foundation course in theory and application of design.
- 121. Basic Drawing.** (3:6:0) F. (m) Burnside, Darais, Johansen, Magleby, Takasaki
The principles of art as applied to drawing. Work in perspective, representation, and individual interpretation and expression.
- 122. Basic Figure Drawing.** (3:6:0) S.Su. (m) Prerequisite: Art 121. Andrus, Gunn, Johansen, Magleby
Drawing from the model. Experience with the elements of graphic expression.
- 226. Art for Elementary Teachers.** (2:2:0) F.S.Su. Breinholt, Gunn, Magleby, Weaver, Wilson
Role of art in public schools; basic art education theory, including levels of artistic growth, classroom activities and aesthetic experiences for teacher growth.
- 227. Design in Oil Painting.** (2:4:0) F.S.Su. (m) Breinholt, Magleby, Turner
Oil colors as a design medium. Emphasis on expressive use of oil paints.
- 233. Design in Water Color Painting.** (2:4:0) F.S.Su. (m) Burnside, Turner
Survey and application of various techniques of water color painting.
- 239. Design (Layout and Lettering).** (2:4:0) F.S. (m) Luch
Basic skills in lettering and designing for commercial purposes.
- 250. Design in Printmaking.** (2:4:0) F.S.Su. (m) Andrus
Introduction to fine printmaking as a medium of design including the relief, intaglio, planographic, and stencil processes.
- 256. Design in Plastic Art Media.** (2:4:0) F.S.Su. (m) Johansen, Wilson
Exploratory design experiences with a variety of ceramic and sculptural materials in creating expressive form through the use of direct working processes.
- 263. Design in Crafts.** (2:4:0) F.S.Su. (m) Johansen, Weaver
Creative design in metal, wood, leather, mosaic, textile, and other media.
- 306. Art History and Appreciation.** (3:3:0) F.S. (G-HA m) Mathews
A survey of the art of the Western world covering the various periods including the contemporary styles in the 19th and 20th centuries.
- 307. Contemporary Art.** (2:2:0) S.Su. (G-HA m) Burnside, Mathews
The rise and progress of contemporary art in Europe and America.
- 308. American Art.** (2:2:0) F. (G-HA m) Burnside
A survey of American painting, architecture, and sculpture from the 17th century to the present.
- 310. Advanced Design.** (2:4:0) F.S. Prerequisites: Art 121, 122, 227, 233, 239, 250, 256, 263. Darais, Magleby
Art structure as a means for expression of ideas and emotions.
- 312. Product Design.** (2:2:2) S. Prerequisites: Art 121, 122, 227, 239, 250, 263. Magleby
Planning and making packages, models, or mock-ups. Emphasis on visual appeal.
- 314. Interior Design.** (2:2:0) F. (m) Taylor
General principles of interior design.
- 321. Interpretive Drawing.** (2:4:0) F. Prerequisites: Art 121, 122. Darais, Johansen
Expressive use of the elements of visual communication. Emphasis on personal selection and interpretation of motifs.

322. **Advanced Figure Drawing.** (2:4:0) S.Su. Prerequisites: Art 121, 122.
Andrus, Johansen, Magleby
Advanced work in drawing the human figure with emphasis on structure and individuality of expression.
327. **Landscape and Still Life Painting.** (2:4:0) F. (m) Prerequisites: Art 121, 122, 227.
Magleby, Turner, Staff
Oil painting from landscapes and still life objects with emphasis on developing the individual expressive capacity of the student.
329. **Landscape and Still Life Painting.** (2:4:0) S. (m) Prerequisites: Art 121, 122, 227.
Turner
Oil painting from landscapes and still life objects with emphasis on developing the individual expressive capacity of the student.
333. **Water Color Painting.** (2:4:0) F.Su. (m) Prerequisites: Art 121, 122, 233.
Turner
Development of basic skills in water color paintings from landscape and still life objects. Experience in the use of transparent water colors emphasized.
335. **Water Color Painting.** (2:4:0) S.Su. (m) Prerequisites: Art 121, 122, 233.
Turner
Development of basic skills in water color painting from landscape and still life objects. Experience in working with various aqueous media.
341. **Layout.** (3:3:0) F. (m) Prerequisites: Art 121, 122, 239.
Luch
Creation of the idea and organization of visual elements for commercial design.
342. **Illustration.** (2:3:0) S. Prerequisites: Art 121, 122.
Gunn
Introduction to editorial and advertising illustration, exploration of tools and media, visualization of the idea, approaches to rendering.
343. **Fashion Illustration.** (2:3:0) S. Prerequisites: Art 121, 122.
Gunn
Introduction to fashion illustration. The gesture proportion, and effective linear expression of the fashion figure; approaches to rendering apparel and the development of individual style.
350. **Printmaking Workshop.** (2:4:0) F.Su. (m) Prerequisites: Art 121, 122, 250.
Andrus
Relief and intaglio fine printmaking based on traditional and contemporary concepts, materials, and procedures.
352. **Printmaking Workshop.** (2:4:0) S. (m) Prerequisites: Art 121, 122, 250.
Andrus
Lithography and silk screen based on traditional and contemporary concepts, materials, and procedures.
356. **Sculpture.** (2:4:0) F.S.Su (m) Prerequisites: Art 121, 122, 256. Johansen
Methods of creating expressive sculptural form which emphasize the direct working processes of modeling, buildup and construction.
358. **Sculpture.** (2:4:0) S. (m) Prerequisites: Art 121, 122, 256. Johansen
Methods of creating expressive sculptural forms which emphasize the cutting and casting processes, encouraging an experimental use of materials.
359. **Ceramics.** (2:4:0) F.S.Su. (m) Wilson
Basic methods of creating functional and expressive objects from clay. Forming processes from constructing and throwing through decorating and glazing to the final fired product.
361. **Ceramics.** (2:4:0) S.Su. (m) Wilson
Advanced and experimental methods of creating functional and/or expressive objects from clay. Concentration on the development of clay bodies and glazes using a variety of firing processes.
362. **Textile Crafts.** (2:4:0) F.S. (m) Prerequisites: Art 121, 122, 263.
Johansen, Weaver
Silk screen, block printing, stenciling, painting, and dyeing as media for textile design.

366. **Metal Crafts and Jewelry Design.** (2:4:0) S.Su. (m) Prerequisites: Art 121, 122, 263, (nonart majors, 263 only). Johansen, Weaver
Creative design of copper, silver, aluminum, and other media used in etching, enameling, forming and modeling, soldering, silver casting, lapidary, etc.
377. **Basic Classroom Procedures.** (3:3:0) F. Prerequisite: Tchr. Ed. 301. Breinholt
403. **Ancient and Primitive Art.** (2:2:0) F. (G-HA m) Mathews
The history of ancient art including Egypt, Mesopotamia, and Greece. Primitive cultures include African Negro, Pacific Islands, American Indian, and Pre-Columbian.
404. **Oriental Art.** (2:2:0) F. (m) Takasaki
History and appreciation of the art of the major periods and dynasties of the Orient from ancient to modern times.
405. **Medieval and Renaissance Art.** (3:3:0) S. (G-HA m) Burnside
The history and appreciation of Medieval and Renaissance painting, sculpture, and architecture.
- 410A,B,C. **Design Studio.** (3:1:5 ea.) F.S.Su. Prerequisite: Art 310. Darais
Advanced design problems. (May be repeated for credit)
415. **Interior Design.** (3:3:0) F. Prerequisite: Art 314. Taylor
A history of interior furnishings. (Continued in Art 417.)
417. **Interior Design.** (3:3:0) S. Prerequisites: Art 314, 415. Taylor
Interior materials.
- 418A,B,C. **Interior Design Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisite: Art 417. Taylor
Specific interior design problems. (May be repeated for credit.)
- 421A,B,C. **Drawing Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisite: Art 321 or 322. Johansen, Staff
Development of individual expressive strengths. (May be repeated for credit.)
- 427A,B,C. **Oil Painting Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisite: Art 327. Turner, Staff
Advanced work in painting. (May be repeated for credit.)
- 433A,B,C. **Water Color Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisite: Art 333 or 335. Turner
Advanced work in watercolor theory and practice. Opportunities for projects in various aqueous media. (May be repeated for credit.)
444. **Portfolio Preparation.** (2:2:2) F.S. Prerequisites: Art 122, 239, 341, 342. Gunn
An analysis of individual strengths and weaknesses. Specialization opportunities provided in various areas of commercial design and display. Preparation of portfolio emphasized.
446. **Advanced Commercial Art.** (2:2:2) F.S. Prerequisite: Art 444. Gunn
Professional standards in a specialized field of commercial art emphasized. Students judged proficient by a faculty committee are given experience in a practicing agency.
447. **Portrait Photography.** (2:4:0) F. Prerequisites: Art 121, 122, 239, Physics 177. Staff
General portrait studio and darkroom procedures with emphasis on the plastic quality of light on the human head and figure.
448. **Pictorial Photography.** (2:4:0) S. Prerequisites: Art 121, 122, 239, Physics 177. Staff
Art structure in its application to photography. Experience in photographing landscape, still life, and the human figure.

- 449A,B,C. Commercial Art Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisites: Art 341, 342, Commun. 250. Luch, Gunn
An extension of the individual's specific interests and needs as applied to practical problems in the field of commercial art. (May be repeated for credit.)
- 450A,B,C. Printmaking Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisite: Art 350 or 352. Andrus
Advanced printmaking on traditional and contemporary concepts. (May be repeated for credit.)
- 456A,B,C. Sculpture Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisite: Art 356. Johansen
Advanced specialization in significant sculptural form. Practical applications considered. (May be repeated for credit.)
- 458A,B,C. Sculpture Studio.** (3:1:5 ea.) F.S.Su. Prerequisite: Art 456. Johansen
Advanced specialization in significant sculptural form. Practical application considered. (May be repeated for credit.)
- 459A,B,C. Ceramics Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisites: Art 359, 361. Wilson
Advanced and experimental methods of producing ceramic objects. Emphasis is on exploratory research in the fields of clay bodies and glazes. (May be repeated for credit.)
- 463A,B,C. Crafts Studio.** (3:Arr.:Arr. ea.) F.S.Su. Prerequisite: Art 263. Weaver
Advanced exploratory problems in design involving craft materials of various kinds. (May be repeated for credit.)
- 474. Portrait and Figure Painting.** (2:4:0) F.Su. Prerequisites: Art 121, 122, 227. Andrus
Oil painting from the model with emphasis on design and the development of a personal method.
- 476. Portrait and Figure Painting.** (2:4:0) S. Prerequisites: Art 121, 122, 227. Andrus
Oil painting from the model with emphasis on design and the development of an expressive style.
- 479. Secondary Student Teaching.** (8:0:0) F.S. Prerequisite: Art 377. Breinholt
- 498. Readings (Honors).** (2:TBA) F.S.Su. Andrus
Selections from the great literature in art.
- 501. Aesthetics.** (2:2:0) S. de Jong
Theoretical and practical criteria of aesthetic values.
- 568 A,B,C. Art Education Studio.** (3:1:5 ea.) F.S.Su. Breinholt, Gunn, Weaver
Curricula and projects in art education. (May be repeated for credit.)
- 580. Mural Design.** (2:2:2) F. Prerequisites: Art 310, 321 or 322. Darais
Historical backgrounds, design and execution of murals.
- 582. Mural Painting.** (2:1:3) F.S.Su. Prerequisites: Art 580. Darais
Historical backgrounds, design, and execution of murals. (May be repeated for credit.)
- 595. Seminar.** (1:0:0) F.S. Staff
Student and faculty analysis of curricula relationships, projection of student objectives, contemporary topics and visits to current exhibits.
- 615. Period Furnishings and Other Decorative Material for Interior Design.** (2:2:2) F. Staff
- 621. Advanced Drawing and Painting.** (2:2:2) F. Andrus
- 624. Advanced Landscape Painting.** (2:2:2) F. Turner

625. Advanced Still Life Painting. (2:2:2) S.	Turner
627. Pictorial Composition. (2:2:2) F.	Darais, Turner
633. Advanced Water Color Painting. (2:2:2) F.	Turner
639. Advanced Layout. (2:2:2) F.	Gunn
642. Advanced Illustration. (2:2:2) S.	Gunn
650. Advanced Relief and Intaglio Printmaking. (2:2:2) F.	Andrus
652. Serigraphy and Color Lithography. (2:2:2) S.	Andrus
656. Advanced Sculpture. (2:2:2) F.	Staff
664. Advanced Ceramics. (2:2:2) F.S.	Wilson
666. Advanced Metal and Jewelry Design. (2:2:2) F.S.	Weaver
668. Art Education. (2:2:0) S.	Gunn
671. Survey of Recent Studies in Art Education. (2:2:0)	Gunn
674. Advanced Portrait Painting. (2:2:2) F.	Andrus
676. Advanced Figure Painting. (2:2:2) S.	Andrus
680. Advanced Mural Design and Painting. (2:2:2) F.	Darais
690. Color. (2:2:0) F.	Andrus
692. Color. (2:2:0) S. Prerequisite: Art 690.	Andrus
695. Seminar. (1:1:0) F.S.	Staff

The following courses may be repeated for credit. They are designed to offer a block of time for concentrated study toward maturity in one of the graduate art fields: (1) painting and sculpture, (2) design. A course of study outline must be prepared by the graduate student and his faculty adviser and must include enough core breadth.

617A,B,C,D. Practical Problems in Interior Design. (4:Arr.:Arr. ea.) Prerequisite: Art 615.	Staff
622A,B,C,D. Advanced Figure Drawing and Painting. (4:Arr.:Arr. ea.) Prerequisite: Art. 621.	Andrus
626A,B,C,D. Advanced Painting. (4:Arr.:Arr. ea.) Prerequisite: Art 621 or 624 or 625 or 674 or 676.	Staff
629A,B,C,D. Advanced Design. (4:Arr.:Arr. ea.) Prerequisite: Art 310.	Darais
635A,B,C,D. Advanced Water Color. (4:Arr.:Arr. ea.) Prerequisite: Art 633.	Turner
647A,B,C,D. Advanced Commercial Art. (4:Arr.:Arr. ea.) Prerequisite: Art 639 or 642.	Gunn
653A,B,C,D. Advanced Printmaking. (4:Arr.:Arr. ea.) Prerequisite: Art 650 or 652.	Andrus
658A,B,C,D. Advanced Sculpture. (4:Arr.:Arr. ea.) Prerequisite: Art 656.	Staff
665A,B,C,D. Advanced Ceramics. (4:Arr.:Arr. ea.) Prerequisite: Art 664.	Wilson
667A,B,C,D. Advanced Crafts. (4:Arr.:Arr. ea.) Prerequisite: Art 666.	Weaver
682A,B,C,D. Advanced Mural Design and Painting. (4:Arr.:Arr. ea.) Prerequisite: Art 580 or 680.	Darais
699. Thesis for Master's Degree. (1-6:Arr.:Arr.)	Staff

Bacteriology

Professors: Beck, Donaldson, Larsen.

Associate

Professor: R. Sagers (chairman, 110B).

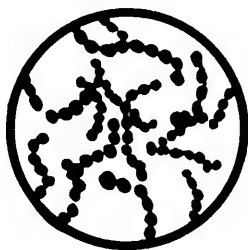
Assistant

Professors: Bradshaw, Hoskisson, Trent.

Instructor: Chugg.

Special

Instructors: Call, LeCheminant, G. Sagers.



The curriculum of the Department of Bacteriology is designed to accomplish the following objectives: (1) train competent bacteriologists and medical technologists, (2) provide a basic background for all students' general education, and (3) serve other departments that request or require specific training in microbiology.

Bacteriology Major

The minimum requirements for a Bachelor of Science degree in the department are completion of the following courses or their equivalents in bacteriology and supporting fields: Bact. 331, 491, 501, 511 and additional upper division courses selected from 401-6, 531-2, 551-2 to bring the total to 20 hours; zoology or botany, 6 hours; Chem. 105, 106, 151, 223, 384, and 385; and Math 105.

The following courses are recommended for students who plan to do post-graduate work in bacteriology: Chem. 105 and 106 or 111, 112, 223, 351, 352, 581, 582; Math. 105 and 106 or 111, 112, 213; Physics 201, 202; Bot. 101, 335, 376, 440 or Zool. 105, 261, 262 or 263, 376, 417.

Students minoring in bacteriology are encouraged to complete Bact. 321 and 322 or 331 plus Bact. 501 and additional hours selected from upper division courses to bring the total to 14 semester hours.

Medical Technology Major

Through a cooperative agreement with the various hospitals, Brigham Young University has made provision for training medical technologists. The program is designed to prepare students for careers in clinical laboratories and medical research laboratories. The curriculum indicated in the following outline consists of a three-year period of residence study at the Brigham Young University campus and one year of practical hospital internship.

During the fourth year (internship) the student will register at the University and pay tuition and fees. After satisfactory completion of the internship, the student is eligible to receive a Bachelor of Science degree.

Failure to achieve a cumulative grade-point average of 2.0 by the end of the sophomore year will be considered sufficient reason to disqualify a student from further participation in the medical technology program.

Freshman Year

	F	S
Math. 105*	3	
Chem. 105, 106	4	4
Zool. 105		3
Eng. 111, 112	3	3
Health 130	2	
Relig.	2	2
Soc. sci.	3	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Electives		2
Total Hours	17$\frac{1}{2}$	16$\frac{1}{2}$

Sophomore Year

	F	S
Chem. 151, 384-5	5	5
Physics 100	3	
Zool. 261, 263		4
Bact. 331		5
Lit.	3	
Relig.	2	2
Humanities	3	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Total Hours	16$\frac{1}{2}$	16$\frac{1}{2}$

*A student requiring Math. 101 prior to 105 should contact his adviser and receive alternate curriculum.

Junior Year			Senior Year		
	F	S		F	S
Bact. 391		2	Bact. 401, 402, 403	15	
Bact. 491	1	1	Bact. 404, 405, 406		15
Bact. 501, 511	5	4			
Zool. 276 or Bot. 276		3	Total Hours	15	15
Zool. 417	3				
Chem. 223	5				
Hist. 170		3			
Relig.	2	2			
Humanities		2			
Total Hours	16	17			

Courses

121. **General Bacteriology.** (3:2:3) F.S. (G-BS) Recommended for students seeking a liberal education in bacteriology who do not have the prerequisites to take the more advanced courses. Staff

A survey of fundamental biological processes observed in bacteria and other microorganisms; growth, reproduction, genetic changes, and metabolism, together with beneficial and harmful activities related to man and other forms of life.

311. **Sanitation and Public Health.** (2:2:0) F.S. Home Study also. (G-BS m) Staff

Sanitary and public health practices. For students desiring a basic course in the role of the individual and the community in promoting health and preventing disease.

321. **General Microbiology.** (3:3:0) F.S. (G-BS m) Prerequisites: any chemistry course and any zoology or botany course. Staff

The microbial world. Recommended for all students seeking a liberal education in bacteriology who have completed the prerequisites.

322. **General Microbiology Laboratory.** (1:0:3) F.S. (G-BS m) Prerequisite: concurrent or previous registration in Bacteriology 321. Staff

331. **Microbiology.** (5:3:6) F.S. (G-BS m) Prerequisite: Any organic chemistry course. Staff

Introduction to bacteriology. The first bacteriology course for students majoring or minoring in bacteriology or medical technology and any other students having the prerequisites and desiring a comprehensive course in bacteriology.

- Botany 335. **Fungi.** (3:1:6)

361. **Food Microbiology.** (2:1:3) S. (m) Prerequisite: Bact. 121 or equivalent. Hoskisson

The microbiology of food.

371. **Dairy Microbiology.** (2:1:3) F. (m) Prerequisite: Bact. 121 or equivalent. Hoskisson

The microbiology of dairy products.

381. **Water and Sewage Microbiology.** (2:1:3) S. (m) Prerequisite: Bact. 121 or equivalent. Hoskisson

The microbiology of water purification and sewage disposal.

391. **Clinical Pathology.** (2:1:3) S. (m) Prerequisite: Bact. 331 Call, LeCheminant Theory and application of diagnostic methods employed in hospital laboratories.

- 401, 402, 403. **Applied Clinical Diagnosis Laboratory.** (5:2:3-6-10 ea.) F. Staff

Applied clinical work is done in an approved hospital during a year's practical internship. Hospital selected must be accredited by Council of Medical Education of the A.M.A. and its pathologist and radiographic technician recognized by the American Society of Clinical Pathologists. Credit is given on basis of a statement from the approved pathologist that student has satisfactorily completed work.

- 404, 405, 406. **Applied Clinical Diagnosis Laboratory.** (5:2-3:6-10 ea.) S. Staff
491. **Undergraduate Seminar.** (1:1:0) F.S. (m) Staff
495. **Special Problems.** (1-4:Arr.:Arr.) F.S. (m) Staff
Individual work on research problems based on the previous preparation of the student.
501. **Pathogenic Microbiology.** (5:3:6) F.S. (m) Prerequisite: Bact. 331 or consent of instructor. Larsen
A study of the characteristics of pathogenic bacteria, viruses, rickettsia, yeasts and molds.
511. **Immunology.** (4:2:6) F.S. (m) Prerequisite: Bact. 501, or consent of instructor. Donaldson
Theories of immunity; training in serological methods.
521. ***Industrial Microbiology.** (2:2:0) F. (m) (Offered 1964-65) Prerequisites: Bact. 331 and biochemistry. Larsen
The employment of microorganisms in industrial processes.
522. ***Industrial Microbiology Laboratory.** (1:0:3) F. (m) (Offered 1964-65) Prerequisite: Completion of or concurrent registration in Bact. 521. Larsen
531. **Virology.** (2:2:0) S. (m) Prerequisite: Bact. 501. Trent
Characteristics of viruses and virus diseases.
532. **Virology Laboratory.** (2:0:6) S. (m) Prerequisite: completion of or concurrent registration in Bact. 531. Trent
541. ***Cultivation and Nutrition of Bacteria.** (2:0:6) F. (m) (Offered 1965-66) Prerequisite: Bact. 331. R. Sagers
A laboratory study of selective enrichment techniques, fundamental nutritional requirements, and growth properties of the major taxonomic groups of bacteria.
551. **Advanced Microbiology.** (3:3:0) S. (m) Prerequisite: Bact. 551. Beck
552. **Advanced Microbiology Laboratory.** (1-2:0:3-6) S. (m) Prerequisite: Completion of or concurrent registration in Bact. 551. Beck, Bradshaw
561. ***Radioactive Tracer Techniques in Biology.** (2:0:6) F. (m) (Offered 1964-65) Prerequisite: Consent of instructor. Beck, R. Sagers
581. ***History of Bacteriology.** (1:1:0) F. (m) (Offered 1964-65) Prerequisite: Senior or graduate status. Larsen
611. ***Advanced Immunology.** (2:2:0) S. (Offered 1964-65) Prerequisite: Bact. 511. Donaldson
- **Agronomy 614. Advanced Soil Microbiology.** (3:2:3).
651. **Special Topics in Bacterial Metabolism.** (2:2:0) F. Prerequisite: Bact. 552. Beck, Bradshaw, R. Sagers
661. ***Microbial Genetics.** (3:3:0) F. (Offered 1965-66) Prerequisites: Bact. 331, a course in general genetics, and Chem. 582 or equivalent. Bradshaw
A study of genetic processes in bacteria and viruses, with special emphasis on recombination, transduction, mutation, replication mechanisms, and related topics.
662. ***Microbial Genetics Laboratory.** (1:0:3) F. (Offered 1965-66) Prerequisite: Completion of or concurrent registration in Bact. 661. Bradshaw
691. **Graduate Seminar.** (1:1:0) F.S. Staff
695. **Research to Furnish Data for Thesis.** (1-10: Arr.:Arr.) F.S. Staff
699. **Thesis for Master's Degree.** (1-4:Arr.:Arr.) F.S. Staff
795. **Doctoral Candidate Research.** (Arr.) F.S. Staff
799. **Dissertation for the Ph.D. Degree.** (Arr.) F.S. Staff
- *Offered alternate years only.

Botany



Professors: Christensen (chairman, 210 B),
Harrison, McKnight.

**Associate
Professors:** Moore, Murdock, Stutz, Welsh.

**Assistant
Professor:** Hess.

Instructor: Van Cott.

**Special
Instructor:** Allred.

Collaborators: Paul W. Conrad, Neil C. Frisch-
knecht, Ralph C. Holmgren, Odell
Julander, William A. Laycock.

A major in botany is designed to prepare a student for a variety of professional careers in secondary schools or institutions of higher learning, in governmental service, in industry, or in research institutions. Botanists are employed in positions such as teacher, conservationist, range manager, geneticist, plant breeder, plant physiologist, mycologist, plant quarantine inspector, taxonomist, museum curator, park ranger, park naturalist, and in forestry research. Students also find a major in botany to be a useful adjunct to other professional careers. Many people find this to be a field of great interest for cultural and aesthetic values and for recreational and avocational pursuits.

Administration of the range management and preforestry programs is under the direction of the Department of Botany.

Students majoring in botany (except those planning to qualify for biology teaching or range management) should take the following courses:

Bot. 101, 110, 225, 321, 331, 335, 376, 440, 450, 490.

Botany majors are required also to gain some field experience in botany. This requirement may be satisfied by taking Bot. 455, by attendance at an approved summer biological station or field camp, or by appropriate summer field work.

Required supporting courses include:

Math. 101, 105, and 106 or 111; 1 year of chemistry beyond Chem. 100, preferably Chem. 105 and 106, or 111 and 112; Zool. 105.

Recommended supporting courses include:

Zool. 212 or 230, 213, 261, 263; Bact. 321, 322; Agron. 282, 303; Geol. 111, 112; Chem. 351, 352; Physics 201, 202.

Major and Minor for Secondary Teachers

The preparation and certification of teachers in biology in secondary schools is a cooperative program between the departments dealing with the biological sciences and the College of Education. Prospective biology teachers must complete either a botany major and a zoology minor or a zoology major and a botany minor. Bot. 377 and 479 are required of all prospective biology teachers.

26-hour list (Major): Bot. 101, 110, 205, 321, 331, 376, 440, 450, 490.

16-hour list (Minor): Bot. 101, 105, 110; 7 hours selected from 205, 225, 321, 440, 450, 460.

Required Supporting Courses for Biology Teachers

Bact. 321, 322; Math. 101, 105 and 106 or 111; one year of chemistry beyond Chem. 100, preferably Chem. 105 and 106 or 111 and 112.

Recommended Supporting Courses for Biology Teachers

Agron. 282; Bact. 501; Bot. 225, 335, 455, 460; Geol. 111, 112; organic chemistry.

Preforestry

Students may prepare themselves for training in forestry by taking the preforestry curriculum during their first two years of college work. This preforestry program is under the supervision of the Department of Botany.

During the freshman and sophomore years students are registered for the basic science courses and the general education courses required for training in forestry. Upon completion of this preforestry program students may enroll in a professional forestry school for their major work in forestry.

Range Management and Range Conservation

The course requirements for a major in range management are outlined below:

Bot. 101, 105, 110, 276 or 376, 440, 450.

Agron. 151, 282, 440.

Three hours from the following: Agron. 302, 303, 305, 308, 311.

An. Sci. 207, 381.

Econ.: Agr. Econ. 112 or Econ. 101.

Chem. 105 and 106 or 111.

Forestry: Bot. 469 (Bot. 161 recommended)

Geol. 101 and 102, or 111.

Math.: Math. 101, 105, and 106 or 111; Statistics 221.

Zool.: two courses from 105, 230, 347, 357, 451.

Range management courses:

Agr. Econ. 350; Bot. 365, 455, 462, 493.

Four to six hours from the following: Agron. 455; Bot. 466, 480, 515, 561, 750.

Minimum credit in range management courses—15 to 17 hours.

Courses

- 101. Plant Biology.** (3:3:2) F.S.Su. (G-BS m) Staff
The study of life, using plants to illustrate the processes and structure of living organisms.
- 105. Plant Kingdom.** (3:3:2) F.S. (G-BS m) Staff
A survey of the plant kingdom, including the morphology of representative species.
- 110. Plant Classification.** (3:2:3) S. (G-BS m) Home Study also. Harrison, Welsh
General principles of taxonomy and use of manuals with emphasis on classification of local flora.
- 161. General Forestry.** (3:3:0) F. (Field trip to be arranged.) Staff
General principles of forestry and forest conservation. The relationship of forests to human affairs.
- 205. Field Botany.** (2:1:3) F.S.Su. (G-BS m) Staff
A study of the common trees and shrubs and their uses.
- 225. General Cytology.** (3:2:3) F. (m) Moore, Stutz
The organization and function of cells.
- 276. Heredity.** (3:3:0) F.S.Su. Home Study also. (G-BS m) Prerequisite: Bot. 101 or Zool. 105. Staff
The principles of genetics and their application to other sciences and to human welfare.
- 321. Plant Anatomy.** (2:1:3) S. (m) Prerequisite: Bot. 101 or Zool. 105. Christensen
A study of plant structures.

331. **Morphology of Green Plants.** (5:3:6) S. (m) Prerequisites: Bot. 101 or Zool. 105, and Bot. 225, 321 or consent of instructor. McKnight
Basic structures, relationships, and life histories of representatives of the major plant groups, exclusive of the fungi.
335. **Mycology.** (3:1:6) F. (m) Prerequisites: Bot. 101 or Zool. 105, and Bot. 225 or consent of instructor. Staff
A study of fungi.
365. **Range Forage.** (2:0:6) F. Prerequisite: Bot. 110 Murdock
Characteristics, distribution, and value of the more important forage plants of the western range.
376. **Genetics.** (3:3:0) F.S. (G-BS m) Prerequisite: Bot. 101 or Zool. 105. Stutz
The principles of genetics.
377. **Secondary Teaching Procedures in Biology.** (3:3:1) F.S. Prerequisite: Tchr. Ed. 301. Allred, Welsh
For course description see Tchr. Ed. 377. Required of biology teachers.
378. **Genetics Laboratory.** (1:0:3) F. (m) Prerequisite: completion of or concurrent registration in either Bot. 276, 376, or equivalent. Staff
Laboratory and field exercises in genetics.
440. **Plant Physiology.** (4:3:3) S. (m) Prerequisites: Bot. 101 and college chemistry. Harrison
Water relations, mineral nutrition, synthesis of foods, digestion, respiration, and growth and reproduction of plants.
450. **Plant Ecology.** (3:2:3) F. (m) (Field trips to be arranged.) (G-BS) Prerequisite: Bot. 101 or Zool. 105. Christensen, Murdock
Relation of plants to their environment, their adaptations to factors of soil and climate, their influences on each other, and their relationships to other organisms.
455. **Field Ecology.** (2:1:Arr.) S.Su. (m) (Includes one field trip of about one week's duration.) Prerequisite: consent of instructor. Christensen, Murdock
Ecological field work in forests and rangelands.
460. **Conservation of Natural Resources.** (2:2:0) F.S.Su. (Trip to be arranged) (G-BS m) Home Study also. Staff
Need for and means of providing conservation of renewable natural resources.
462. **Range Management.** (3:2:3) S. (m) Prerequisite: Bot. 450. Staff
Problems associated with the management, grazing, revegetation, and maintenance of rangelands.
466. **Range Revegetation and Improvement.** (3:2:3) F. (m) Prerequisite: Bot. 450 Christensen, Murdock
Artificial and natural revegetation and the use of fencing, watering, and other range facilities.
469. **Forest Management.** (3:3:0) S. (Field trips to be arranged.) Staff
Management of forest resources for multiple use.
479. **Secondary Student Teaching.** (4-8:0:20-40) F.S. Prerequisite: Bot. 377 Allred, Welsh
For course description see Tchr. Ed. 479. Required of biology teachers.
480. **Plant Pathology.** (3:2:3) F. (m) Prerequisite: Bot. 101 or Zool. 105. Hess
Important plant diseases, their identification, causes, and methods of control.
490. **Seminar.** (1:1:0) F. (m) Staff
Presentation and discussion of selected topics.

493. **Seminar in Plant Ecology and Range Management.** (1:1:0) S. Staff
Presentation and discussion of current research in range ecology and range management.
496. **Special Problems in Range Management.** (1-3:0:3-9) F.S. Staff
498. **Special Problems.** (1-3:0:3-9) F.S. Staff
501. **Histological Technique.** (2:0:6) F. Prerequisite: Bot. 101 or Zool. 105. Staff
Techniques of preparing plant tissues for microscopic examination.
510. **Advanced Taxonomy.** (3:2:3) S.Su. Prerequisites: Bot. 110 and Bot. 276 or consent of instructor. (One three-day field trip to be arranged.) Welsh
515. **Agrostology: Taxonomy and Ecology of Grasses.** (2:1:5) F. Offered 1964-65 and alternate years. Prerequisite: Bot. 110. Harrison
Classification and ecology of grasses. Important forage species are emphasized.
525. **Advanced Cytology.** (3:2:3) F. Prerequisite: Bot. 101 or Zool. 105. Moore, Stutz
535. **Advanced Mycology.** (4:2:6) S. (Offered 1964-65 and alternate years. Prerequisite: Bot. 335. McKnight
Advanced studies of fungi with emphasis on genetics.
539. **Paleobotany.** (3:2:3) S. (Offered 1965-66 and alternate years) Prerequisites: Bot. 101 or 105, and Historical Geology. Staff
550. **Plant Geography.** (3:2:3) F. (Offered 1965-66 and alternate years) Welsh
The distribution of plant species and communities in the light of present and past climates.
561. **Watershed Management.** (3:2:3) S. (Offered 1965-66 and alternate years) Murdock
591. **Seminar.** (1:1:0) F. Staff
Presentation and discussion of current topics in botany.
598. **Special Problems.** (1-3:0:3-9) F.S. Staff
630. **Angiosperm Morphology.** (4:3:3) F. (Offered 1964-65 and alternate years) Prerequisite: Bot. 105 or 331. Moore
A detailed study of the flowering plants with emphasis on relationships.
634. **Morphogenesis.** (3:2:3) F. (Offered 1965-66 and alternate years) Prerequisite: familiarity with taxonomy, anatomy, and physiology or biochemistry. Moore
The development of form in organisms, with emphasis on plants.
638. **Advanced Mycology II.** (2:1:3) F.Su. (Offered 1964-65 and alternate years) McKnight
A detailed study of taxonomy and morphology of special groups.
641. **Physiology of Fungi and Algae.** (4:3:3) F. (Offered 1965-66 and alternate years. Prerequisite: Bot. 335, 440. Staff
655. **Field Ecology.** (2:1:Arr.) S.Su. (Extended field trip.) Prerequisite: consent of instructor. Christensen, Murdock
Ecological field work in forests and rangelands.
676. **Cytogenetics.** (3:2:3) F. (Offered 1964-65 and alternate years) Prerequisites: genetics and cytology. Stutz
678. **Speciation.** (3:3:0) S. Prerequisite: genetics or consent of instructor. Stutz

680. **Advanced Plant Pathology.** (3:2:3) S. (Offered 1965-66 and alternate years)
Prerequisite: Bot. 480. Hess
- A detailed study of plant diseases and their causes, with emphasis on viruses, fungal pathogens, or nematodes.
691. **Graduate Seminar.** (1:1:0) S. Staff
- 697, 698. **Special Problems.** (1-3:0:3-9 ea.) F.S.Su. Staff
699. **Thesis for Master's Degree.** (1-6:1:3-12) F.S.Su. Staff
740. **Advanced Plant Physiology I.** (3:2:3) S. (Offered 1965-66 and alternate years. Prerequisite: Bot. 440. Harrison
741. **Advanced Plant Physiology II.** (3-4:2:3:3) F. (Offered 1964-65 and alternate years. Prerequisite: Bot. 440. Harrison
742. **Plant Nutrition and Growth.** (3:2:3) F. (Offered 1965-66 and alternate years) Prerequisite: Bot. 440. Harrison
750. **Grassland and Desert Ecology.** (3:3:0) F. (Offered 1964-65 and alternate years) Prerequisite: consent of instructor. Christensen, Murdock
752. **Forest Ecology.** (3:3:0) F. (Offered 1965-66 and alternate years) Prerequisite: consent of instructor. Christensen, Murdock
760. **Conservation of Natural Resources.** (3:2:3) F. (Offered 1964-65 and alternate years) Prerequisite: consent of instructor. Christensen, Murdock
776. **Population Genetics.** (3:3:0) S. (Offered 1965-66 and alternate years) Prerequisite: genetics. Pre-Stutz
795. **Research for Doctoral Degree.** (2-4:0:6-12) F.S.Su. Staff
799. **Doctoral Dissertation.** (Arr.) F.S.Su. Staff



Instructor and students observing in new greenhouse

Business Education

Professors: Christensen, Peterson

Associate

Professors: Crandall (chairman, 351 JKB),
Bell, Croft, Polson.

Assistant

Professors: Taylor, Waters

Instructors: Ashby, DeMille, Perry, Petersen,
Smith, Stoddard, Warner



The Business Education Department provides, within the framework of the College of Business goals, the preparation needed by young men and women for responsible positions in business and professional business teaching. The four-year programs described below include basic preparation in general education and the college "core" of business fundamentals. A maximum of five hours of "D" credit in required business education courses (or approved substitutes) will be accepted toward satisfying the requirements of any of the majors in this department.

Office Administration

This major is intended for students who prefer office administration and supervision to clerical or stenographic work (no shorthand courses are required).

Preparation is provided for positions in middle management in the rapidly growing profession of office administration which provides up-to-date information to top management. Training in work accomplishment, supervision, paper-work management, and motivation of personnel is emphasized. On-the-job training, coupled with class work, provides a well-rounded program designed to meet the demands of employers in the interesting area of supervision of office functions and personnel.

Executive Secretary

In response to the need for capable, mature administrative assistants the executive secretary program provides a broad background in general education, business fundamentals, and secretarial experience. To work cooperatively and understandingly with the business executive is a basic tenet in the preparation of young men and women desiring to become executive assistants.

Business Teacher

The College of Business cooperates with the College of Education in the preparation of qualified business teachers. The business teacher program is designed to include participation by the College of Business faculty in the professional preparation of the business teacher. Majors are recommended for graduation upon the successful completion of (a) the prescribed program of preparation in the Department of Business Education for prospective business teachers, (b) one of three approved teaching minors in the College of Business, and (c) the professional requirements for certification to teach in the public secondary schools in states where four-year degrees are required

Graduate Business Teacher Education

A complete program of graduate courses in business teacher education is provide for teachers desiring a master's degree, or for experienced teachers desiring to fulfill state recertification requirements. Consult the graduate catalog for further details.

Business Technology
(Two-year program)

See the Technical Institute section of this catalog.

Office Administration

I. College of Business Core Requirements:

	Hours
Math. 105	3
Acctg. 201 and 202	6
Acctg. 342	3
Bus. Mgt. 347	3
Bus. Mgt. 348 or Econ. 453	3
Econ. 111 and 112	6
Econ. 311, 312, or 274	3
Statistics 221	3

II. Office Administration Requirements:

Bus. Ed. 203	2
Bus. Ed. 206	2
Bus. Ed. 220	3

Bus. Ed. 305	3
Bus. Ed. 320	3
Bus. Ed. 370	3
Bus. Ed. 480	2
Bus. Ed. 485, 486	1, 1
Nine additional hours to be selected from the following in consultation with the supervisor:	

Bus. Ed. 570*	2-4
Bus. Ed. 590*	2
Acctg. 301	3
Acctg. 302	3
Acctg. 355	3
Acctg. 555	3
Bus. Mgt. 420	3

* Approval of department chairman required.

Executive Secretary

I. College of Business Core Requirements:

(See listing under Office Administration.)

II. Executive Secretary Requirements:

Bus. Ed. 203	2
Bus. Ed. 204	2
Bus. Ed. 206	2
Bus. Ed. 220	3
Bus. Ed. 305	3
Bus. Ed. 312	4

Bus. Ed. 320	3
Bus. Ed. 370	3
Bus. Ed. 411	4
Bus. Ed. 475	3
Bus. Ed. 485 or 486	1
Bus. Mgt. 480 or 481	1

The following courses may be used as electives or substitutes only with approval of the department chairman.

Bus. Ed. 570	2-4
Bus. Ed. 590	2

Business Teacher

I. Professional Education Requirements:

Bus. Ed. 377	3
Bus. Ed. 479	8
Other professional education courses	12
(See "Preparation of Secondary School Teachers" in the College of Education section for other required professional courses leading to secondary certification. Certification requirements must be completed to be recommended for graduation.)	

Bus. Ed. 206	2
Bus. Ed. 220	3
Bus. Ed. 300	2
Bus. Ed. 311 or 411	4
Bus. Ed. 312	4
Bus. Ed. 320	3
Bus. Ed. 370	3
Bus. Ed. 475	3
Bus. Ed. 485 or 486	1

Electives selected from the College of Business exclusive of the teaching minor 6
(Note: To qualify for a teaching major, students in the business teaching program must also complete Acctg. 201 and 202, and Econ. 101 or 111.)

II. Business Teacher Requirements

Bus. Ed. 203	2
Bus. Ed. 204	2

Minors

Three approved teaching minors within the College of Business are available to prospective business teachers. See the College of Education section of this catalog for details.

The Business Education Department also offers two nonteaching minors—one in the office administration program and one in the executive secretary program.

An office administration minor requires the completion of 14 hours of credit, including Bus. Ed. 206, 220, 305, 320, and 370.

An executive secretary minor requires the completion of 14 hours of credit, including Bus. Ed. 203, 206, 220, 311, and 370.

Courses

- 101. Beginning Typewriting.** (2:3:2) F.S.Su. Staff
Mastery of the keyboard and development of basic skills. Students with high school credit in typewriting should not register for this course.
- 111. Elementary Shorthand.** (4:5:1) F.S.Su. Prerequisite: Bus. Ed. 101. Staff
Fundamentals of shorthand theory with emphasis on fluency in reading and writing shorthand. Students with previous courses in Gregg shorthand should not register for this course.
- 112, 113. Intermediate Shorthand.** (4:5:1 ea.) F.S.Su. Prerequisites: Bus. Ed. 111. Staff
Emphasis on rapid writing and accurate transcription from shorthand notes. Students achieving 100 words per minute in Bus. Ed. 112 may then register for Bus. Ed. 211.
- 203. Speedbuilding in Production Typewriting.** (2:3:2) F.S. Su. (m) Prerequisite: Bus. Ed. 101 or equivalent. Staff
Intensive drills with emphasis on measurement of speed and control in the production of manuscripts, outlines, minutes, tabulations, letter writing, rough drafts, and legal instruments.
- 204. Advanced Production Techniques in Typewriting.** (2:3:2) F.S.Su. Prerequisite: Bus. Ed. 203 or equivalent. Staff
Application of advanced production techniques to practical business problems including statistical reports, office projects, editing, and composition.
- 206. Calculating and Posting Machines.** (2:3:2) F.S.Su. (m) Staff
Instruction and practice in the operation of adding machines, key-driven calculators, rotary calculators, printing calculators, and posting machines for solving practical business problems.
- 211. Transcription.** (4:5:1) F.S.Su. Prerequisite: shorthand speed of 100 words per minute. Staff
Emphasis on rapid production of mailable transcripts from shorthand notes dictated at speeds up to 120 words per minute.
- 220. Business Communication.** (3:3:0) F.S.Su. (m) Prerequisite: Eng. 111, 112. Staff
Current means of communication; experience in the composition of business correspondence.
- 300. Fundamentals of Business Education.** (2:2:0) F.S. Staff
Designed to give an understanding of the fundamentals of business education.
- ☐ **Accounting 301. Intermediate Accounting.** (3:3:0)
- ☐ **Accounting 302. Intermediate Accounting.** (3:3:0)
- 305. Principles and Methods for Analyzing Office Operations.** (3:3:0) F.S. (m) Staff
Introduction to problems of office management, tools, and methods of problem solution. Areas of concentration include office standards and

quality control, job analysis and work simplification, time studies and automation in office operations.

320. **Report and Business Writing.** (3:3:0) F.S. (m) Staff
Intensive experience in communicating business analyses and results of fact-finding procedures.

□ **Accounting 355. Concepts of Data Processing Systems.** (3:3:2)

370. **Records Control and Office Machines.** (3:3:3) F.S.Su. (m) Staff
Fundamentals of filing, machine transcription, duplicating machines, and other office equipment, supplies, and procedures.

377. **Secondary Teaching Procedures.** (3:3:1) F.S. Prerequisite: Bus. Ed. 300 and Tchr. Ed. 301. Staff
For course description see Tchr. Ed. 377.

411. **Expert Shorthand.** (4:5:1) S. Prerequisite: Bus. Ed. 312. Staff
Expert shorthand speed course for students writing above 120 words per minute.

□ **Bus. Mgt. 420. Human Relations in Administration I.** (3:3:0)

475. **Procedures for Executive Assistants.** (3:3:2) F.S.Su. Prerequisites: Bus. Ed. 204, 220, 311, and 370. Staff

479. **Secondary Student Teaching.** (8:0:40) F.S. Prerequisite: Bus. Ed. 377 Staff
For course description and fee see Tchr. Ed. 479.

480. **Case Studies in Office Management.** (2:2:1) S. Staff
Extensive use of cases in office management. Student analysis, group discussions, and written reports form the principal basis for conduct of the course.

□ **Business Management 480, 481. Executive Lectures.** (1:1:0)

- 485, 486. **Lectures on Office Administration.** (1:1:0 ea.) F. Staff
Each offered alternate years.

□ **Accounting 555. Data Processing Systems.** (3:3:0) F. Prerequisite: Acctg. 355

570. **Cooperative Business Experience Internship.** (2-4:0:10-20) Staff
The student is placed in actual office situations at the prevailing rate of pay enabling him to enrich classroom theory with practical application. Arrangements for this internship (available on block and semester plan) must be made at least one semester in advance with the departmental supervisor of office administration.

590. **Seminar.** (2:2:0) F.S.Su. Staff
An intensive clinic emphasizing one or more selected topics in business education.

615. **Methods of Instruction in Business Education: Typewriting and Shorthand.** (2:2:0) F.Su. Staff
A critical evaluation of classroom methods, psychology of learning, and findings of research pertaining to improvement of instruction in typewriting, shorthand, and related subjects.

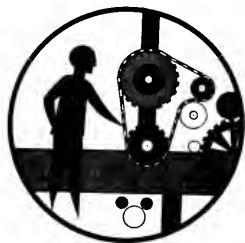
620. **Methods of Instruction in Business Education: Bookkeeping and Economic Education.** (2:2:0) S.Su. Staff
An analysis of course content, classroom methods, and teaching materials pertaining to improvement of instruction in bookkeeping and economic education.

- 625. Tests and Measurements in Business Education.** (2:2:0) S.Su. Prerequisite: Stat. 221 or equivalent. Staff
A survey of tests and measurements used in business education and an analysis of their uses and methods of construction.
- 630. Current Developments Influencing the Curriculum and Content of Business Education.** (2:2:0) S.Su. Staff
A study of recent technological developments, such as automation in business, and an analysis of the content, materials, and procedures of business education.
- 635. Analysis of Recent Research in Business Education.** (2:2:0) F.Su. Staff
Review and analysis of recent research in business education, and evaluation of its implications for improved classroom instruction.
- 640. Trends of Thought in Business Education.** (2:2:0) F.Su. Staff
Fundamental ideas that have shaped the business curriculum in the United States, and basic issues that have affected purposes, trends, and control of business education in public and private institutions.
- 665. Practicum in Business Education.** (2:2:0) F.Su. Staff
Planning and development of research projects in the field of business education. Experienced teachers may use actual school problems and projects.
- 675., 676. Business Education Workshop.** (2:2:0 ea.) Su. Staff
A series of clinics in selected business subjects. Each offered alternate years.
- 694. Independent Readings.** (1-2:1-2:0) F.S.Su. Staff
- 698. Field Project for Master's Degree.** (1-4: Arr.:Arr.) F.S.Su. Staff
- 699. Thesis for Master's Degree.** (1-4:Arr.:Arr.) F.S.Su. Staff



A business education typing class

Business Management



Professors: Boyle, Oaks, W. Taylor.

Associate Professors: Sessions (chairman, 158 JKB), McKay.*

Assistant Professors: Andrus, Call, Covey*, Done, Faerber, Rickenbach, Daines*.

Instructors: Barnes, Lambert, Milner.

The primary objective of this department is to prepare students for professional careers in business management. The courses of study and methods of instruction are designed to develop personal qualities in each student which will enable him to realize his full potentialities as an effective administrator. Stress is placed on the development of such qualities as the art of decision making, facility in the use of analytical tools and techniques, and the ability to communicate effectively.

Students planning to major in this department should complete, in the time sequence indicated, the following general education, college, and departmental core requirements. After completing these general education and core requirements, a student can elect any one of the different concentrations presented in detail below.

An automatic composite minor in accounting and economics will have been earned by those students majoring in the department at the successful completion of the college and departmental core requirements.

Students minoring in the Department of Business Management should take the following courses:

Acctg. 201	3 credit hours
Three classes from your elected concentration in the department	9 credit hours
One additional class from another business management concentration (340, 347, 348, 420 & 589)	3 credit hours
TOTAL	15 credit hours

It is strongly recommended that students minoring in business management take Econ. 111 as a part of their general education requirements.

CONCENTRATIONS:

Marketing - 347 (3 credit hours) plus 2 classes (6 credit hours) from 455, 456, 457, 555, 556, 557, 558.

Finance - 347 (3 credit hours) plus 2 classes (6 credit hours) from 450, 451, 452, 552, 565, 567, 571, 574, and Econ. 453.

Management - 340 and 420 (6 credit hours) plus any one other (3 credit hour) business management class.

Bus. Mgt. 205, 480, and 481 are not to be counted toward the minor requirements in this department. However, they are recommended as worthwhile courses for all interested business students.

A maximum of six hours of D credit will be allowed for graduation: three hours in the college and departmental core requirements and three hours in the area of concentration.

For details concerning the program of graduate study leading to the Master of Business Administration degree, students should consult the Graduate School Catalog.

General Education

(Freshman through senior years)

See the Student Academic Services section of this catalog for courses needed to satisfy the general education requirements of the University. A detailed discussion of courses which can be taken in each required area is listed therein.

COLLEGE AND DEPARTMENTAL CORE

Freshman and Sophomore Years		Junior and Senior Years	
	Hours		Hours
Math. 105 and Acctg. 232, or Math. 111	5-6	Acctg. 342	3
Acctg 201, 202	6	Econ. 311 or 312	3
Econ. 111, 112	6	Bus. Mgt. 340	3
Statistics 221	3	Bus. Mgt. 347	3
		Bus. Mgt. 348	3
		Bus. Mgt. 420	3
		Bus. Mgt. 589	3

BUSINESS ADMINISTRATION CONCENTRATION

The business administration course is designed to integrate the various areas included in the department curriculum and consequently to give exceptional students a broad background in management training at the undergraduate level. Particular emphasis is placed on the use of the case method.

Students who desire to adopt this concentration should apply in writing to the chairman of the department. Upon acceptance, they will be assigned a counselor to work with them to outline the courses which they will be required to complete. Acceptance is based on previous experience and objectives in applying for a special course of training, as well as a minimum grade-point average of 3.0.

FINANCE AND BANKING CONCENTRATION

The course work offered in this area is designed, first, to familiarize business students with the elements of financial planning and, second, to provide specialized work for those who seek positions of management and executive responsibility in financial institutions or the financial departments of business firms. The requirements are flexible enough to allow some specialization toward commercial banking, investment banking, business finance, insurance, real estate, investment management, or financial counseling.

Students elected to concentrate in this area of the Department of Business Management are required to take three of the four courses listed under Group A and a minimum of five semester hours selected from the courses listed under Group B.

Group A	Hours	Group B	Hours
Bus. Mgt. 450	3	Econ. 453	3
Bus. Mgt. 451	3	Econ. 402	3
Bus. Mgt. 452	3	Bus. Mgt. 565	2
Bus. Mgt. 552	3	Bus. Mgt. 567	2
		Bus. Mgt. 571	3
		Bus. Mgt. 574	3

MARKETING CONCENTRATION

The marketing course is designed to prepare students for positions of management and executive responsibility in the fields of industrial marketing, retailing, wholesaling, advertising, sales management, and market research. Requirements for a concentration in this area include both courses in Group A, one of the two courses in Group B, and two of the three courses in Group C.

Group A	Hours	Group C	Hours
Bus. Mgt. 455	3	Bus. Mgt. 555	3
Bus. Mgt. 558	3	Bus. Mgt. 556	3
Group B	Hours	Bus. Mgt. 557	3
Bus. Mgt. 456	3		
Bus. Mgt. 457	3		

INDUSTRIAL MANAGEMENT CONCENTRATION

The industrial management concentration provides training for positions in industrial engineering, production control, purchasing, industrial relations, and the operating departments of industrial enterprises. In addition, it facilitates entry into executive trainee programs, the active management of small business, or the continuation of training in a graduate school of business.

Students electing a concentration in industrial management are required to complete the following program in addition to the college and departmental core:

Freshman, Sophomore, and Junior Years		Senior Year	
	Hours		Hours
Math. 111*	5	Bus. Mgt. 561	5
Math. 112	5	Bus. Mgt. 562	5
Math. 213	5	Statistics 432	2
Physics 211**	4	Acctg. 556	3
Chem. 105	4		
Drawing 110	2		

* Mathematics 111 should be taken in place of Accounting 232 and Math 105.

** Students are encouraged to take Physics 212, General Physics Laboratory, with Physics 211.

INDUSTRIAL RELATIONS AND PERSONNEL MANAGEMENT CONCENTRATION

The personnel management concentration is designed to prepare students for positions in the personnel and employee relations areas for marketing, financial, and manufacturing institutions in business.

Students electing a concentration in this area are required to take the basic courses in Group A and a minimum of five semester hours selected from Group B. These are the minimum requirements for preparation in this field. Students interested in further study are encouraged to consider taking the additional courses in Groups B and C.

Group A		Group C	
	Hours		Hours
Bus. Mgt. 521	3	Econ. 462	3
Bus. Mgt. 569	3	Commun. 435 (Journ.)	3
Econ. 461	3	Sociol. 505	3
Group B		Sociol. 552	3
Psych. 330	2	Sociol. 555	2
Psych. 336	4	or Psych. 555	2
Sociol. 357	3		
or Psych. 357	3		
Sociol. 350	3		
Sociol. 446	3		

Courses

205. **Personal Finance.** (2:2:0) F.S. (m) Boyle
A practical course in money management with particular reference to utilization of savings.
303. **Managerial Control.** (3:3:0) F.S. (m) Prerequisites: Acctg. 201, 202, and Statistics 221 or consent of instructor. Staff
Emphasizes the understanding and use of accounting and other quantitative data for decision-making purposes.
340. **Industrial Organization and Management.** (3:3:0) F.S. (m) Staff
Introduction to the producing function of business, plant location and layout, machinery and equipment utilization, employee-employer relations, and industrial control.
347. **Marketing Management.** (3:3:0) F.S. (m) Done
Analysis of problems and concepts concerned with the distribution of goods from producer to consumer. Includes treatment of product planning, pricing, channels of distribution, and promotion.

- 348. Financial Management.** (3:3:0) F.S. (m) Prerequisites: Acctg. 201, 202, and Statistics 221 or consent of instructor. Lambert, Call
Introduction to the elements of financial management from the viewpoint of the business manager, emphasizing profitability, liquidity, and long-range financial planning.
- 420. Human Relations in Administration I.** (3:3:0) F.S. (m) Lambert, Milner
Case problems involving communication processes, face-to-face relationships, and the securing of cooperation are discussed to develop a way of understanding oneself and others.
- 450. General Insurance.** (3:3:0) F. (m) Staff
Life, health, accident, fire, property, and liability insurance and principles of risk-bearing as they apply to each classification of the insurance field.
- 451. Investments.** (3:3:0) F.S. (m) Call
Survey of the operation of the security markets with development of one's ability to analyze corporate and governmental securities for investment purposes. Introduction to portfolio selection.
- 452. Commercial Bank Management.** (3:3:0) F.S. (m) Call
Principal problems of commercial bank management considered from the point of view of bank management. Discussions involve management of assets, credit analysis, investment policies, and profitability.
- 455. Promotional Strategy.** (3:3:0) F.S. (m) Prerequisite: Bus. Mgt. 347 or equivalent Andrus, Done
An overview of the selling and promotional media available to management. An introduction to the characteristics and use of personal selling, advertising, publicity, and other promotional tools.
- 456. Retailing.** (3:3:0) F.S. (m) Prerequisite: Bus. Mgt. 347 or equivalent. Done
A survey of retail store operation which considers executive control, profit planning, merchandising, store location, layout, organization, policies, system, and coordination of store activities.
- 457. Industrial Marketing.** (3:3:0) F. (m) Prerequisite: Bus. Mgt. 347 or equivalent. Done
Principles, practices, and policies of business concerns engaged in movement of goods from manufacturer to retailer and from manufacturer to industrial user.
- 459. Transportation Management.** (3:3:0) F. (m) Prerequisites: Bus. Mgt. 340, 347, or consent of instructor. Staff
An examination of current problems of management in the transportation industries through discussion of cases and readings.
- 480, 481. Executive Lectures.** (1:1:0 ea.) F.Su. (m) Staff
Top executives from throughout the nation visit the campus and meet students in a series of lectures dealing with subjects significant to executive leadership.
- 521. Human Relations in Administration II.** (3:3:0) F.S. (m) Prerequisite: Bus. Mgt. 420 or consent of instructor. Lambert, Milner
An illuminating conceptual framework for understanding group processes is developed to identify factors contributing to understanding, growth, and cooperation in group work and leadership
- 552. Advanced Financial Management.** (3:3:0) F.S. (m) Prerequisite: Bus. Mgt. 348 or consent of instructor. Call
Analytical approach to financial concepts such as capital budgeting and present value, valuation, reorganization, and cash management as well as important current financial problems.

- 555. Problems in Advertising.** (3:3:0) S. (m) Prerequisite: Bus. Mgt. 455 or consent of instructor. Andrus, Done
Problems in the use of advertising as part of management's overall marketing strategy. Stresses planning, coordination, control, and evaluation of effectiveness.
- 556. Problems in Retail Store Management.** (3:3:0) Prerequisite: Bus. Mgt. 456 or consent of instructor Sessions
Problems involved in policy formulation and implementation and in the coordination of store activities through the use of controls and standards.
- 557. Problems in Sales Management.** (3:3:0) F.S. (m) Prerequisite: Bus. Mgt. 347 or consent of instructor. Done
Problems in sales methods, sales organization, management of sales force (selection, training, compensation, and supervision), and sales planning and control.
- 558. Marketing Research.** (3:3:0) F.S. (m) Prerequisite: Bus. Mgt. 347 or consent of instructor. Oaks
Exploration of uses, methods, and techniques of marketing research. A major research project is required.
- 561. Problems in Production—Manufacturing Processes.** (5:4:2) F. (m) Prerequisites: Drawing 102 and senior standing in the department. Other by approval of instructor. Milner
Part one of a one-year course dealing with problems encountered by production personnel. Considers (1) the materials and manufacturing processes commonly used in industry; (2) process analysis as applied to work simplification and plant layout; and (3) time study, job evaluation, wage administration, manpower planning, and production control.
- 562. Problems in Production—Manpower Management and Production Control.** (5:6:0) S. (m) Prerequisite: Bus. Mgt. 561. Milner
Part two of a one-year series; (561-562).
- 565. Life Insurance.** (2:2:0) S. (m) Staff
Advanced study of the nature and functions of life insurance and its application to personal and business needs.
- 566. Property and Casualty Insurance.** (2:2:0) S. (m) Prerequisite: Bus. Mgt. 450 or consent of instructor. Staff
Advanced study of the functions of fire and marine insurance, casualty insurance, and corporate building insurance.
- 567. Real Estate Administration.** (2:2:0) S. (m) Prerequisite: Econ. 454 or consent of instructor. Rickenbach
Economics of real estate valuation investment, finance, and the role of government in urban property.
- 569. Personnel Management.** (3:3:0) F.S. (m) Prerequisites: Econ. 345 and Bus. Mgt. 420, or permission of instructor Staff
Management of the personnel function: job evaluation, organization planning, employee selection, training, compensation, morale, labor relations, and management development. Method case analysis and research projects.
- 571. Management of Financial Institutions.** (3:3:0) S. (m) Prerequisites: Bus. Mgt. 348 and 452 or consent of instructor. Staff
Consideration of management problems of nation's major financial institutions. Emphasis will be upon asset management, loan management, and the role of the institution as financial intermediaries.
- 574. Investment Management.** (3:3:0) S. (m) Prerequisite: Bus. Mgt. 451. Staff
Theory of investment management and its application in formulation of investment policies for different types of investors.

- 575. Advanced Production Methods.** (2:2:0) S. (m) Prerequisite: Bus. Mgt. 561. Staff
Advanced methods work, automation, and the application of data processing to industrial operations.
- 577. Business Enterprise and Moral Responsibility.** (2:2:0) F.S. (m) Prerequisite: senior standing. Staff
A case course in decision-making areas involving conflicts of interest which necessitate reconciling economic objectives and fundamental goals of business.
- 579. Problems in Marketing.** (3:3:0) F.S. (m) Prerequisite: Bus. Mgt. 347 or consent of instructor. Staff
Analysis of problems in marketing management with particular emphasis on integrating the various functional areas.
- 585. Industry Analysis.** (3:3:0) F.S. (m) Prerequisite: Bus. Mgt. 340 or consent of instructor. Staff
Production characteristics of major industries. Large business units are studied in terms of sources of raw materials, production techniques, financial structure, degree of integration, stage of maturity, character of mechanization, government regulation, and possible future developments.
- 589. Business Policy.** (3:3:0) F.S. (m) Prerequisite: senior standing in the department. Lambert, Call, Milner
Cases involving determination of long range objectives in the business firm and the development of sound and consistent policies for achieving these objectives.
- 591. Research and Diagnosis of Business Problems.** (1-2:Arr.:Arr.) F.S. Prerequisite: Completion of or concurrent registration in Bus. Mgt. 589. Staff
Provides experience in the research and diagnosis phase of case method. Includes preparation of cases from actual business situations.
- 601A,B. Administration.** (2:2:0 ea.) F.S. Prerequisite: admission to the M.B.A. Program. Staff
- 605. Administration C.** (2:2:0) F. Prerequisite: Bus. Mgt. 601. Staff
- 607. Administration D.** (3:3:0) S. Prerequisite: Bus. Mgt. 605. Staff
- 611A,B. Operations.** (5:5:0 ea.) F.S. Prerequisite: admission to the M.B.A. Program. Staff
- 615. Operations C.** (3:3:0) F. Prerequisite: Bus. Mgt. 611. Staff
- 617. Operations D.** (3:3:0) S. Prerequisite: Bus. Mgt. 615. Staff
- 621A,B. Quantitative Analysis.** (5:5:0 ea.) F.S. Prerequisite: admission to the M.B.A. Program. Staff
- 625. Quantitative Analysis C.** (3:3:0) F. Prerequisite: Bus. Mgt. 621. Staff
- 627. Quantitative Analysis D.** (3:3:0) S. Prerequisite: Bus. Mgt. 625. Staff
- 631A,B. Environment.** (3:3:0 ea.) F.S. Prerequisite: admission to the M.B.A. Program. Staff
- 635. Environment C.** (2:2:0) F. Prerequisite: Bus. Mgt. 631. Staff
- 637. Environment D.** (3:3:0) S. Prerequisite: Bus. Mgt. 635. Staff
- 641A,B. Communication and Research.** (2:2:0 ea.) F.S. Prerequisite: admission to the M.B.A. Program. Staff
- 645. Communication and Research C.** (4:4:0) F. Prerequisite: Bus. Mgt. 641. Staff
- 647. Communication and Research D.** (4:4:0) S. Prerequisite: Bus. Mgt. 645. Staff
- 699. Thesis for Master of Science or Arts Degree.** (1-6:Arr.:Arr.) F.S. Staff

Chemical Engineering Science



Professors: Barker (chairman, 176 ELB), Pope.

**Associate
Professor:** Christensen.

**Assistant
Professors:** Hanks, Horton.

A chemical engineer helps in many ways to change raw materials into useful and valuable products. He does this through the use of chemical and physical processes. Using his basic knowledge of chemistry, physics, mathematics, and economics, he designs, builds, and operates complex plants. He deals with people either as a supervisor, a manager, or as a technical salesman. Chemical engineers do basic scientific research and development work in the chemical, petroleum, and plastic industries as well as in the fields of atomic energy, space technology, water purification, metals, textiles and many others. A chemical engineer not only learns about engineering but he is also well trained in physics, chemistry, and mathematics. With this broad background a chemical engineer is ready to step into numerous industrial fields or enter graduate work.

Entrance Requirements

A chemical engineering student first enrolls for two years in the pre-engineering course outlined in the College of Physical and Engineering Science section of this catalog. He must satisfy both the general University and college requirements. Upon completion of this work he may apply for and be admitted to the professional course in chemical engineering which is outlined below.

Grade Requirements

The grade requirements for admission to the professional program are listed in the College of Physical and Engineering Science section of this catalog.

If a student does not maintain a cumulative grade-point average of "C" or better in all advanced mathematics, chemistry, and physics, he will be placed on a probationary status by the department.

In order to graduate, a student must maintain an overall average of at least "C." No more than four hours of "D" credit in the major department will be counted toward graduation.

Requirements of Major and Options

To obtain a degree in chemical engineering, the student must complete the program described below. Students enrolled in the air science program will normally be required to spend an extra summer to complete their work in five years. These students should consult with the personnel of the air science program.

A student who wishes to obtain some specialization in a supporting field such as applied mathematics, business, chemistry, nuclear engineering, or space engineering may substitute restricted elective courses for certain courses listed below. All requests for changes must be made in writing to the student's adviser and will be acted on by the department.

Students who wish to develop a background oriented more to the basic sciences may substitute certain courses in physics for civil engineering and electrical engineering subjects.

The listings of the optional courses as well as those courses which can be used as restricted electives are available from the department.

The following abbreviations are used: Ch. E. for chemical engineering, C. E. for civil engineering, E.E. for electrical engineering, and M.E. for mechanical engineering.

General Education Group Requirements

Engineering science students are subject to all of the general education requirements listed in this catalog with the following exceptions:

- (1) They may take the required course in health any time during the first or second year.
- (2) The biological science requirement may be reduced to four semester hours instead of the six semester hours specified. All of these may be obtained in a single course if desired.
- (3) Maximum advantage should be taken of the three hours of religion credit given for attending devotional assemblies for a period of three years.

Engineering students may register for 18 hours, exclusive of physical education, forum, and devotional, in any one semester without obtaining special permission.

Sequence of Courses for Majors Preengineering

See College of Physical and Engineering Science section of this catalog.

First Year Professional (Third Year)			Statistics 321		
	F	S	Chem. 504		
Chem. 461, 462	4	4	E. E. 301, 302	4	4
Ch. E. 371, 372	2	2	Group Electives		3
Math. 336, 313	3	3	Relig.	2	
Ch. E. 378		3			
Econ. 111	3		Total Hours	17	18
Relig.	2	2			
C. E. 203, 301	2	3	Third Year Professional (Fifth Year)		
E. E. 300	1			F	S
Total Hours	17	17	Ch. E. 571	3	
Second Year Professional (Fourth Year)			Ch. E. 574		3
	F	S	Ch. E. 576	3	
C. E. 303	3		Ch. E. 578	3	
Ch. E. 471, 472	3	3	Ch. E. 579		3
Ch. E. 473, 474	3	3	Ch. E. 599	2	1
Ch. E. 475		3	Group restricted		
			electives	6	10
			Total Hours	17	17

Courses

- 271. Introduction to Chemical Engineering.** (1:1:0) S. Staff
Includes introduction to process calculations, lectures on professional development, and field trips to selected chemical industries.
- 371, 372. Chemical Process Principles.** (2:2:0 ea.) F.S. Prerequisites: Chem. 106 or 112 and Physics 213. Pope
Stoichiometry, material balances, energy balances, thermochemistry, thermophysics. Application to chemical processes.
- 378. Engineering Materials.** (3:3:0) F.S. Prerequisite: Chem. 106 or 112
Barker, Christensen, Hanks
Principles which underlie the behavior and govern the properties of materials as related to their engineering applications.

- 471. Introduction to Transport Phenomena.** (3:3:0) F. Prerequisites: Ch. E. 372, Math. 313, 336. Barker
Theories of heat, momentum, and mass transfer, and analogies among these transport mechanisms. Molecular and turbulent mechanisms; steady and unsteady state applications.
- 472. Unit Operations.** (3:3:0) S. Prerequisite: Ch. E. 471. Barker
Applications of transport principles to problems of heat transfer and fluid flow.
- 473, 474. Chemical Engineering Thermodynamics.** (3:3:0 ea.) F. S. Prerequisites: Ch. E. 372, Math. 336, and Chem. 461. Christensen, Horton
The first and second laws of thermodynamics and their applications to the behavior of real fluids. Thermodynamic properties of materials, potential functions, and chemical equilibria.
- 475. Chemical Engineering Laboratory.** (3:1:4) S. Prerequisites: Ch. E. 471, 473, and concurrent registration in Ch. E. 472. Staff
Laboratory studies of unit operations including absorption, extraction, distillation, humidification, drying, filtration, and sedimentation. Comprehensive reports are required.
- 571. Unit Operations.** (3:3:0) F. Prerequisite: Ch. E. 472. Barker, Hanks
Fundamentals of stage operations. Applications of transport principles to such mass transfer operations as humidification, drying, crystallization, distillation, extraction, and absorption.
- 574. Chemical Engineering Plant Design and Economics.** (3:3:0) S. Prerequisite: Ch. E. 571. Staff
Design of chemical engineering machinery, plants, and/or processes requiring the application of unit operations theory, chemical process principles, and economic analysis.
- 576. Chemical Engineering Laboratory.** (3:1:4) F. Prerequisites: Ch. E. 475 and concurrent registration in Ch. E. 571. Staff
Laboratory studies of unit operations including absorption, extraction, distillation, humidification, drying, filtration, and sedimentation. Comprehensive reports are required.
- 578. Chemical Engineering Kinetics.** (3:3:0) F. Prerequisites: Ch. E. 474 and Chem. 462. Christensen, Pope
Theories and applications of chemical kinetics in catalytic and non-catalytic reacting systems.
- 579. Process Dynamics and Unit Processes.** (3:3:0) S. Prerequisite: Math 334 or instructor's permission. Barker
A fundamental study of the measurement and control of process variables. The characteristics of processes, controllers, measuring elements, and the application of closed loop techniques.
- 598. Special Problems.** (1-3:Arr.:Arr.) F.S.Su. Staff
Registration by permission.
- 599. Chemical Engineering Undergraduate Thesis.** (1-2:Arr.:Arr.) F.S.Su. Staff
An undergraduate thesis required of all students graduating from the department. Minimum of three semester hours required.
- 671. Advanced Heat Transfer.** (2:2:0) F. Barker, Christensen, Horton
- 672. Advanced Fluid Flow.** (2:2:0) F. Pope, Hanks
- 673. Advanced Transport Phenomena.** (3:3:0) F. Hanks
- 674. Advanced Thermodynamics.** (3:3:0) F. Christensen, Horton
- 675. Separations Processes.** (2:2:0) Arr. Pope
- 677. Creative Skills in Chemical Engineering.** (2:2:0) S. Christensen, Pope

681. Kinetics and Catalysis. (3:3:0) S.	Christensen, Pope
682. Nuclear Engineering. (2:2:0) Arr.	Barker
683. Advanced Plant Design. (2:2:0) Arr.	Pope
684. Advanced Processs Dynamics and Control. (2:2:0) Arr.	Barker
685. Chemical Engineering Analysis. (2:2:0) Arr.	Hanks
686. Distillation. (2:2:0) Arr.	Pope
687. Chemical Engineering Economics. (2:2:0) Arr.	Pope, Christensen
688. Special Problems. (Arr.) Arr.	Staff
691. Seminar. (0:1:0) F.S.	Staff
697. Research. (Arr.) F.S.Su.	Staff
699. Thesis for Master's Degree. (Arr.) F.S.Su	Staff



Instructor and student checking equipment

Chemistry



Professors: Bryner (chairman, 225 ESC), Anderson, Blackham, Broadbent, Goates, Gubler, Hall, Nelson, Nicholes, Swensen, Vernon.

Associate Professors: Butler, Izatt, Peterson, Snow.

Assistant Professors: Bills, Cluff, Hawkins, Mangum, Ott, White, Wing.

Supt. of Laboratories and Stores: Meibos.

Graduates in chemistry obtain positions in virtually every industry. Graduates with imagination and intellectual curiosity are in especial demand to fill research positions. The curriculum in chemistry is rigorous but intellectually rewarding.

New Program (Beginning Fall, 1964)

This program will be applicable to students registering as freshmen in the academic year 1964-65 and in subsequent years. Sophomores and upperclassmen will follow the old program in 1964-65. Upperclassmen will follow the old program in 1965-66. Students returning after an absence of one or more years should contact their advisers regarding their course schedule.

A student who wishes to graduate with a major in chemistry certified by the American Chemical Society must successfully complete the following courses: Chem. 111, 112, 351, 352, 354 (2 hours), 355 (2 hours), 461, 462, 464, 465, 491, 594 (A & B), 504, 514, 521, 522, and 5 hours of credit chosen from the 500 series courses offered by the department. In addition, Math. 111, 112, 213, and 334; Physics 211, 212, 213, 214, and 315; and one year of college credit (or its equivalent) in French, German, or Russian are required. If a student is not prepared to start Chem. 111 upon his enrollment, he should take Chem. 105 followed by 111 and 112. No more than five hours of "D" credit in chemistry will be counted in meeting the requirements of either of the majors in chemistry.

A student who wishes a major in chemistry not certified by the American Chemical Society (e.g. premedical, predoctoral, chemistry teaching majors, etc.) must successfully complete the following courses: Chem. 111 and 112 (or 105, 106 and 223), 351, 352, 354 (1 hour), 355 (1 hour), 461, 462, 464, 465, 491, 594 (A & B), and either 514 or 521. The total credit hour requirement under this option varies from 30 to 34 hours depending upon the courses selected.

For special requirements of the College of Physical and Engineering Sciences, see that section of this catalog. Attention is called especially to the preparation required in mathematics and to the possibility of substituting air science credit for general education credit.

For details concerning the program for graduate study leading to the M.S. and Ph.D. degrees in chemistry, students should consult the Graduate School Catalog.

Old Program

A major in chemistry shall consist of a minimum of 42 hours' credit, including credit in each of the following courses: Chem. 111, 112, 113, 321, 322, 351, 352, 354 (2 hours), 355 (2 hours), 461, 462, 464, 465, 594, (A & B), 495, 491. The remainder of the credit may be obtained by taking any other upper division chemistry courses. It is recommended, however, that the additional courses be taken from the following list: Chem. 404, 504, 514, 551, 580, 581, 582, 584, 585, 592. One year of college credit (or its equivalent) in French, German, or Russian is

required. The student who desires to be certified upon graduation by the American Chemical Society should consult his adviser for details. No more than five hours of "D" credit in chemistry will be counted in meeting the requirements for any of the majors in chemistry. Credit in Chem. 100, 101, 102, 221, 284, all designed as service courses for students in other areas, will not apply toward a major in chemistry

A major in premedical or predental chemistry shall consist of a minimum of 30 hours' credit in the following courses: Chem. 111, 112, 113, 321, 351, 352, 354, 355, 461, 462, 464, and 465. These majors are open only to bona fide premedical and predental students.

A chemistry teaching major shall consist of a minimum of 32 hours' credit in courses selected from the following list: Chem. 111, 112, 113, 321, 322, 351, 352, 354, 355, 461, 462, 464, 465, 504, 514, 581, 584, and 591. A chemistry teaching major is open only to those who meet the requirements for teacher accreditation by the State of Utah.

Suggested Curriculum (New Program)

I

Chem. 111	5	Chem. 112	5
Math. 111	5	Math. 112	5
Eng. 111	3	Eng. 112	3
Relig.	2	Relig.	2
Phys. ed.	$\frac{1}{2}$	Phys. ed.	$\frac{1}{2}$
Health 130	2	Hist. 170	3
<hr/>		<hr/>	
Total Hours	17 $\frac{1}{2}$	Total Hours	18 $\frac{1}{2}$

II

Chem. 351-4	5	Chem. 352-5	5
Math. 213	5	Math. 334	3
Physics 211-212	5	Physics 213-14	5
Phys. ed.	$\frac{1}{2}$	Phys. ed.	$\frac{1}{2}$
Relig.	2	Relig.	2
<hr/>		Gen. ed. and electives	3
Total Hours	17 $\frac{1}{2}$	<hr/>	
		Total Hours	18 $\frac{1}{2}$

III

Chem. 461-4	4	Chem. 491	1
Math. 336	3	Chem. 462-5	4
German 101	4	Physics 315	3
Relig.	2	German 102	4
Gen. ed. and electives	5	Relig.	2
<hr/>		Gen. ed. and electives	4
Total Hours	18	<hr/>	
		Total Hours	18

IV

Chem. 521-2	4	Chem. 504	2
Chem. 594 A	$\frac{1}{2}$	Chem. 514	3
*Advanced chem.	3	Chem. 594 B	$\frac{1}{2}$
Relig.	2	*Advanced chem.	2
**Advanced physics	3	Relig.	2
Gen. ed. and electives	6	Gen. ed. and electives	9
<hr/>		<hr/>	
Total Hours	18 $\frac{1}{2}$	Total Hours	18 $\frac{1}{2}$

*Chosen from 500 series courses in chemistry.

**Physics 431 or 551.

Courses

- 100. Elementary College Chemistry.** (2:2:0) F.S.Su. (G-PS) Staff
An introduction to the structure of matter and the chemical consequences of that structure. For nonscience majors in partial fulfillment of the general education requirement for graduation and for science majors who require additional background in order to register for Chem. 105.
- 101. Introductory Chemistry.** (5-4:5:4-2) F.S. (G-PS m) Staff
General principles of inorganic chemistry for nonphysical science majors whose discipline requires a supporting background in chemistry. Not recommended for those who contemplate extending their studies in those areas beyond the baccalaureate degree.
- 104. Elementary Chemistry Laboratory.** (1:0:2) F.S. (G-PS m) Staff
For students who desire laboratory experience in chemistry to accompany Chem. 100.
- 105, 106. General College Chemistry.** (4:4:3 ea.) F.S. (G-PS m) Prerequisites: completion of or concurrent registration in Math. 105 or 111 or its equivalent. High school chemistry or physics is recommended. Staff
A course in the general principles of chemistry for students in the various science and engineering areas. Three lecture periods, one quiz-drill period, and one three-hour laboratory period per week.
- 111, 112. Principles of Chemistry.** (5:4:6 ea.) F.S.Su. (G-PS m) Prerequisites: completion of or concurrent registration in Math. 105 or 111; completion of one year of high school chemistry. One year of high school physics is recommended. Staff
A course in the fundamentals of chemistry for those students who have had superior training in high school physical sciences. Quantitative chemical measurement and qualitative analysis are emphasized in the laboratory.
- 113. Principles of Chemistry and Qualitative Inorganic Analysis.** (3:2:6) F. (Will not be taught after academic year 1964-65) (m) Prerequisite: Chem. 112. Staff
One lecture period, one quiz period, and two three-hour laboratory periods each week.
- 151. Introductory Organic Chemistry.** (5-4:5:4-2) F.S. (G-PS m) Prerequisite: Chem. 101 or equivalent. Staff
General principles of organic chemistry for nonphysical science majors whose discipline requires a supporting background in chemistry. Not recommended for those who contemplate extending their studies in those areas beyond the baccalaureate degree.
- 221. Quantitative Analysis.** (3:2:4) F.S.Su. (Will not be taught after the academic year 1964-65). (m) Prerequisite: Chem. 113. Butler, Wing
For agricultural and biological science majors.
- 223. Quantitative and Qualitative Analysis.** (5:3:6) F.S. (m) Prerequisite: Chem. 106 or consent of instructor. Staff
A course emphasizing the principles of chemical equilibrium, quantitative chemical measurements, and qualitative detection of selected chemical elements.
- 228. Fire Assaying.** (2:1:3) F. (m) Prerequisite: Chem. 112 or 223. Wing
- 301. Fundamentals of Chemistry for General Science Teachers.** (2:2:0) Su. Staff
Restricted to experienced teachers of general science or similar subjects.
- 321, 322. Analytical Chemistry.** (4:2:6 ea.) F.S. Prerequisites: Chem. 113 and Math. 112. (321 will not be taught after academic year 1964-65; 322 will not be taught after academic year 1965-66.) Butler, Wing
For physical science and engineering majors. Includes a formal introduction to the location and use of chemical literature.

- 351, 352. **Organic Chemistry.** (3:3:0 ea.) F.S.Su. Prerequisites: Chem. 112 or 223 or consent of instructor, and concurrent registration in Chem. 354 and 355, respectively. (By special permission of the instructor prior to registration, Chem. 352 may be taken without concurrent registration in Chem. 355.)
Blackham, Broadbent, Hawkins, Nelson
- 354, 355. **Organic Chemistry Laboratory.** (1-2:0:3-6 ea.) F.S.Su. Prerequisite: concurrent registration in Chem. 351 and 352 respectively.
Blackham, Broadbent, Hawkins, Nelson
384. **Introductory Physiological Chemistry.** (3:3:0) S. (m) Prerequisite: Chem. 151 or 351.
Staff
385. **Physiological Chemistry Laboratory.** (2:0:6) S. (m) Prerequisite: concurrent registration in Chem. 384.
Staff
404. **Methods of Glass Manipulation.** (1:0:3) F.S. Prerequisite: permission of instructor.
Bryner
- 461, 462. **Physical Chemistry.** (3:3:0 ea.) F.S. Prerequisites: Chem. 321, Physics 213, and Math. 213, and concurrent registration in Chem. 464 and 465, respectively.
Anderson, Bryner, Snow
- 464, 465. **Physical Chemistry Laboratory.** (1:0:3 ea.) F.S. Prerequisite: completion of or concurrent registration in Chem. 461, 462, respectively.
Anderson, Bryner, Snow
491. **Chemical Literature and Technical Writing.** (1:1:0) S. Broadbent, Nelson
500. **History of Chemistry.** (2:2:0) S. Nicholes
503. **Research Laboratory Techniques.** (1:0:3) F. Staff
504. **Instrumental Analysis.** (2:1:3) F.S. Prerequisite: Chem. 461, 464. Ott
514. **Inorganic Chemistry.** (3:3:0) Izatt
518. **Inorganic Syntheses.** (2:0:6) (Offered 1965-66 and alternate years.)
Bills, Cluff, Izatt
521. **Analytical Chemistry.** (2:2:0) S. Prerequisites: Chem. 462, 465. Butler
522. **Analytical Chemistry Laboratory.** (2:0:6) S. Prerequisite: concurrent registration in Chem. 521. Butler
524. **Quantitative Microanalysis.** (2:1:3) S. (Offered 1964-65 and alternate years.) Staff
551. **Systematic Identification of Organic Compounds.** (2-3:1:3-6) F.
Blackham, Broadbent, Hawkins, Nelson
552. **Advanced Organic Chemistry.** (3:3:0) S.
Blackham, Broadbent, Hawkins, Nelson
561. **Chemical Thermodynamics.** (3:3:0) F. Prerequisite: Chem. 462. Goates, Ott
562. **Chemical Thermodynamics.** (2:2:0) S. Goates, Ott
564. **Nuclear and Radiochemistry.** (3:2:2) S. (Offered 1965-66 and alternate years.) Anderson
- 581, 582. **Biochemistry.** (3:3:0 ea.) F.S. Prerequisite: Chem. 352.
Gubler, Mangum, Swensen, White
- 584, 585. **Biochemistry Laboratory.** (2:0:6 ea.) F.S. Prerequisite: completion of or concurrent registration in Chem. 581, 582, respectively.
Gubler, Mangum, Swensen, White
- 594A,B,C,D,E,F,G,H. **General Seminar.** ($\frac{1}{2}$:1:0 ea.) Required of all senior and graduate students in chemistry every semester in residence. Staff

- 598. **Special Problems.** (Arr.) Arr. Staff
Registration by permission.
600. **Directed Teaching in Chemistry.** (1:1:0) F.S. Staff
Designed for students in the NA-3 program in chemistry.
601. **Geometry of Atoms and Molecules.** (3:3:0) F. Staff
612. **Chemistry of the Nonmetals.** (2:2:0) F. (Offered 1964-65 and alternate years.) Bills, Cluff
613. **Chemistry of the Metals.** (2:2:0) F. (Offered 1965-66 and alternate years.) Bills, Cluff
658. **Organic Syntheses.** (3:1:6) F. Broadbent, Hawkins, Nelson
663. **Reaction Kinetics.** (2:2:0) S. (Offered 1965-66 and alternate years.) Anderson
681. **Biochemistry of Carbohydrates and Lipids.** (3:3:0) F. (Offered 1964-65 and alternate years.) Gubler, Mangum, Swensen, White
682. **Biochemistry of Proteins and Nucleic Acids.** (3:3:0) S. (Offered 1964-65 and alternate years.) Gubler, Mangum, Swensen, White
- 697. **Master's Candidate Research.** (Arr.) Arr. Staff
699. **Thesis for Master's Degree.** (Arr.) Arr. Staff
711. **Coordination Compounds.** (2:2:0) F. (Offered 1964-65 and alternate years.) Bills, Izatt
719. **Selected Topics in Inorganic Chemistry.** (1-3:1-3:0) Arr. Staff
725. **Electro-Analytical Chemistry.** (3:3:0) F. (Offered 1964-65 and alternate years.) Butler
729. **Selected Topics in Analytical Chemistry.** (1-3:1-3:0) Arr. Staff
751. **Mechanisms of Organic Reactions.** (3:3:0) F. Broadbent, Nelson
757. **Chemistry of Natural Products.** (3:3:0) S. (Offered 1965-66 and alternate years.) Broadbent
758. **Heterocyclic Compounds.** (3:3:0) S. (Offered 1964-65 and alternate years.) Broadbent, Hawkins
- 759. **Selected Topics in Organic Chemistry.** (1-3:1-3:0) Arr. Staff
- 761, 762. **Statistical Mechanics.** (3:3:0 ea.) F.S. (Offered 1964-65 and alternate years.) Snow
- 765, 766. **Quantum Chemistry.** (3:3:0 ea.) F.S. (Offered 1965-66 and alternate years.) Snow
769. **Selected Topics in Physical Chemistry.** (1-3:1-3:0) Arr. Staff
781. **Enzyme Chemistry.** (2:2:0) F. (Offered 1965-66 and alternate years.) Gubler, Mangum, Swensen, White
782. **Biological Oxidation.** (2:2:0) S. (Offered 1965-66 and alternate years.) Gubler, Mangum, Swensen, White
- 789. **Selected Topics in Biochemistry.** (3:3:0) F.S. Staff
797. **Doctoral Candidate Research.** (Arr.) Arr. Staff
799. **Dissertation for the Ph.D. Degree.** (Arr.) Arr. Staff

Civil Engineering Science

Professors: Barton (chairman, 196 ELB),
Enke, Firmage, Fuhrman, Rollins.

**Assistant
Professors:** Karren, Tippetts, Wilkes, Wilson.

Instructor: Goodwin.

**Special
Instructor:** Durrant.



This department offers a professional program leading to the degree of Bachelor of Engineering Science in civil engineering. Advanced work is also offered leading to a Master of Science degree. Course work is offered in the areas of mechanics, structures, hydrology, hydraulics, soil mechanics, highways, and municipal and sanitary engineering.

Training at B.Y.U. places emphasis on the science foundations of mathematics, physics, and chemistry. The student is provided also with a well-balanced program of social studies, religion, biological science, and humanities.

The extensive background of the faculty will prove valuable to those who wish to undertake special projects in their undergraduate work or research topics in their graduate work. Seminar work and participation in technical meetings sponsored by student organizations provide a rich beginning to a career in civil engineering. Professional opportunities in this field exist in research and development, design, sales and application engineering, teaching, and business management.

Entrance Requirements

For both the general entrance requirements of the University and the particular requirements specified for the College of Physical and Engineering Sciences, see those sections of this catalog. The student first enrolls in the pre-engineering course. This is outlined in the College of Physical and Engineering Science section. After satisfactory completion of this work, he will be admitted to the professional school in civil engineering.

Grade Requirements

See the College of Physical Engineering and Science section of this catalog for grade requirements for admission to professional school.

A cumulative average grade of "C" or better must be maintained in all advanced mathematics and engineering subjects; otherwise, the student is placed on a probationary status in the department. No more than six hours of "D" credit in the major department will be counted toward graduation.

Requirements of Major

The degree of Bachelor of Engineering Science may be obtained by completing the program outlined below. Students enrolled in air science will normally be required to spend an extra summer in order to finish their program.

It is possible for students to take course work during the last year of the program that may be applied to a graduate degree. Such action requires advanced application and approval and restricts the total overall load to 16 credit hours. The department chairman should be consulted for further details.

The following abbreviations are used: Ch. E. for chemical engineering, C. E. for civil engineering, E.E. for electrical engineering, and M.E. for mechanical engineering.

General Education Group Requirements

Engineering science students are subject to all of the general education requirements listed in this catalog, with the following exceptions and comments:

- (1) They may take the required course in health any time during the first or second year.
- (2) The biological science requirement may be reduced to four semester hours instead of the six semester hours specified. Civil engineers will meet the biological sciences required by taking Bacteriology 121 and 381.
- (3) Maximum advantage should be taken of the three hours religion credit given for attending devotional assemblies for a period of three years.
- (4) It is particularly recommended that the student take Economics 101, Psychology 111, or Sociology 111 in satisfying the social science group requirements.

Engineering students may register for 18 hours, exclusive of physical education, forum, and devotional in any one semester without obtaining special permission.

NORMAL SEQUENCE OF COURSES FOR MAJORS

Preengineering Program

See College of Physical and Engineering Science section of this catalog.

Professional School of Civil Engineering

First Year Professional (Third Year)							
	F	S					
C. E. 303, 304	3	3		C. E. 423, 424	3	3	
C. E. 321		2		C. E. 431, 432	3	3	
E. E. 300	1			Ch. E. 378	3		
M. E. 321, 412	3	4		Bact. 381		2	
Bact. 121	3			Relig.	2	2	
Geol. 111		4		General education	2	4	
Math. 313	3						
Relig.	2	2					
General education	3	3					
				Total Hours	18	18	
Total Hours	18	18					
Second Year Professional (Fourth Year)				Third Year Professional (Fifth Year)			
	F	S			F	S	
C. E. 401		2		C. E. 525	3		
C. E. 403	3			C. E. 541	3		
C. E. 413		2		C. E. 542		3	
C. E. 422	2			C. E. 551, 561	3	3	
				C. E. 571		3	
				C. E. 591 a, b	$\frac{1}{2}$	$\frac{1}{2}$	
				E. E. 301, 302	4	4	
				General education	2	2	
				Total Hours	15 $\frac{1}{2}$	15 $\frac{1}{2}$	

Courses

- 101. Engineering Graphics.** (2:1:4) F.S. Staff
Materials and instruments in engineering drawing, introductory practice in orthographic projection; transfer of pictorial sketches and machine part samples to scaled drawing; reproduction processes; and drawing principles.
- 102. Engineering Graphics.** (2:1:4) F.S. Prerequisites: Math. 111, C. E. 101 or equivalent. Staff
Graphics principles, including descriptive geometry, projections, perspective applications, and developments.

- 203. Engineering Graphics.** (2:1:4) F.S. Prerequisites: C. E. 102, Math. 112, or consent of instructor. Staff
Graphical mathematics, empirical equations, nomography, graphical calculus, graphic statics.
- 211. Elementary Surveying.** (3:2:3) F. Prerequisites: Math. 111, C. E. 102 or consent of instructor. Staff
Lectures and field work in measurements of distances, angles, and differences of elevation using the usual survey methods and instruments; preparation of notes; adjustments; simple triangulation and traverses; and use of the plane table.
- 212. Engineering Surveying.** (2:1:3) S. Prerequisite: C. E. 211. Staff
More advanced concepts in survey theory, including curve and earth-work survey and astronomical observations. Emphasis on engineering uses of survey techniques.
- 301. Engineering Mechanics—Statics.** (3:2:3) F.S. Prerequisites: college physics, C. E. 203, and Math. 213. Staff
Introductory concepts of mechanics, force systems, and problems of equilibrium applied to structures, centers of gravity and centroids, elementary hydrostatics, friction in engineering problems, beam problems, and virtual work.
- 302. Engineering Mechanics—Dynamics.** (3:2:3) F.S. Prerequisite: C. E. 301. Staff
Definitions and principles of kinematics and kinetics; engineering applications in terms of force, mass acceleration, work and energy, impulse and momentum, periodic motion.
- 303. Engineering Mechanics—Mechanics of Materials.** (3:2:3) F.S. Prerequisite: C. E. 301. Staff
Fundamental concepts in terms of elastic stress and strain relations; cylinders and spheres under pressure; problems of torsional load; beam theory including bending stresses, complex stress, calculation of deflection and continuity aspects, two-dimensional elastic theory.
- 304. Engineering Mechanics—Dynamics.** (3:2:3) F.S. Prerequisites: C. E. 301, Math. 313, 334. Staff
Basic concepts of dynamics applied to particles, systems of particles, rigid bodies vibration systems, nonrigid particles systems and an introduction to selective topics in advanced methods in dynamics. Vector notations used in the treatment of all topics.
- 321. Elementary Structural Theory.** (2:2:0) S. Prerequisite: C. E. 301. Staff
Theory of statically determinate structures; force systems; analysis of trusses and frames; influence diagrams; loads on structures; approximate methods of analysis of indeterminate structures.
- 401. Properties of Materials.** (2:1:3) F.S. Prerequisite: C. E. 303 or consent of instructor. Staff
Theories and procedure of physical testing of materials; introduction to failure theories and solid state concept of behavior of materials; the mechanics of deformation.
- 403. Concrete Technology.** (3:2:3) F. Prerequisite: Geol. 111. Staff
Manufacture and testing of cements; technology of concrete materials and concrete mix design; techniques of concrete handling, placing, and treatment; laboratory work.
- 413. Photogrammetry.** (2:1:3) F. Prerequisite: C. E. 212. Staff
Theory and application of the use of terrestrial and aerial photographs to produce maps; vertical and oblique photography and mapping procedures; stereoscopic viewing and measurements for relative position of objects in three dimensions, photo interpretation, sources of error.

- 422. Statically Indeterminate Structures.** (2:2:0) F. Prerequisite: C. E. 321. Staff
Stability and determinateness of structures; deflections, moment-area and conjugate beam, moment-distribution.
- 423. Structural Design.** (3:2:3) F. Prerequisite: C. E. 321. Staff
Design of structural elements in metal—beams, columns, tension member, plate girders—and riveted, welded, and bolted joints.
- 424. Reinforced Concrete Design.** (3:2:3) S. Prerequisites: C. E. 321, 422. Staff
Theory and design of reinforced concrete structures from both the elastic and plastic approach. Introduction to pre-stressed concrete.
- 431. Hydrology.** (3:2:3) F. Prerequisite: M. E. 412. Staff
Water as it occurs in nature; relationships between precipitation, evaporation, infiltration, transpiration, groundwater, and stream runoff.
- 432. Hydraulic Design.** (3:2:3) S. Prerequisites: M. E. 412, C. E. 423 and 431. Staff
Theory and design of water control and water conveyance structures such as dams, pipelines, open channels, and hydraulic transitions.
- 501. Advanced Mechanics of Materials I.** (3:3:0) (Interdepartmental) Arr. Pre-requisite: C. E. 303. Staff
Introduction to theories of elasticity, plasticity, and strain energy methods; stresses and strains in beams, curved members, rotating discs, thick cylinders, torsion and structural members.
- 502. Advanced Properties of Materials I.** (3:3:0) (Interdepartmental) Arr. Pre-requisite: 401 or equivalent. Staff
Modern concepts of mechanics as applied to the behavior of engineering materials under various loading conditions and use including static, creep, fatigue and impact; stress concentrations; temperature and other environmental conditions; state of stress and internal structure; dislocation theory; tests and interpretation of test data.
- 503. Applied Elasticity.** (3:3:0) Arr. Prerequisites: C. E. 303; Math. 313, 334. Staff
Analysis of stress and strain in two dimensions; equation of equilibrium and compatibility; problems in elasticity; emphasis on applications to machine and structural design.
- 507. Experimental Stress Analysis I.** (3:2:3) Arr. Prerequisite: C. E. 303. Staff
Principles and techniques of the experimental methods of stress determination and their application to static engineering problems; includes mechanical and optical gages, and brittle lacquers; emphasizes electric strain gages, calibration, and instrumentation; introduces photoelasticity and photostress techniques.
- 525. Advanced Structures.** (3:2:3) F. Prerequisites: C. E. 422, 424. Staff
Theory and design of statically indeterminate structures, redundant frames, strain energy methods, Castigliano's theorems, slope-deflection equations, and special topics in advanced structural design.
- 526. Advanced Structural Theory.** (3:2:3) Arr. Prerequisites: C. E. 422, 424. Staff
Continued analytical methods in structural mechanics and iterative processes; solutions of complex structural types; arches; secondary stress.
- 531. Water Resources Engineering.** (3:2:3) Arr. Prerequisites: C. E. 424, 431, and 432. Staff
Planning and basic design of hydro-electric, flood control, irrigation, and multi-purpose projects involving the utilization of water resources; consideration of hydraulic and hydrologic design elements.
- 541. Elementary Soil Mechanics.** (4:3:3) F. Prerequisites: Geol. 111, C. E. 303, M. E. 412. Staff
Basic physico-chemical characteristics of soils. The soil water system. Permeability seepage and associate uplift pressures. Consolidation theory, strength theory and the shearing strengths of sand and clay. Earth pressure theories, slope stability analysis, and applied aspects.

- 542. Foundation Engineering.** (3:2:3) S. Prerequisite: C. E. 541. Staff
Subsurface exploration, bearing capacity concepts, settlement of structures, and basic principles of foundation design.
- 543. Physico-Chemical Characteristics of Soils.** (3:3:0) Arr. Prerequisites: Chem. 106, C. E. 441. Staff
Physico-chemical relationships in soils, including the structures of the clay minerals, properties of the electrical double layer, ion exchange phenomena, and soil moisture movement and equilibria.
- 551. Sanitary Engineering.** (3:2:3) F. Prerequisites: C. E. 432, Bact. 381. Staff
Review of public health engineering. Applications to design, construction, and operation of water supply and sewerage systems.
- 561. Highway Engineering.** (3:2:3) S. Prerequisite: C. E. 542. Staff
Traffic studies, geometric design grade separations, and interchanges. Properties subgrades, base courses, bituminous materials, and surface pavements. Theory and practice in flexible pavement design. Design of concrete pavements and techniques of road construction.
- 571. Engineering Ethics, Economics, and Legal Problems.** (3:3:0) Arr. Staff
Professional, legal, and economic problems of the engineering profession, including contracts, specification writing, and ethics. Case histories are studied as they affect the engineering profession.
- 591, 592. Civil Engineering Seminar.** ($\frac{1}{2}$:1:0 ea.) F.S. Staff
Group discussion of technical and professional activities of the civil engineering profession. Participation by faculty, professional engineers, and other invited personnel and advanced students. Required of all fifth-year civil engineers.
- 602. Advanced Properties of Materials II.** (3:3:0) Arr. Prerequisite: C. E. 502 or equivalent. Staff
Topics selected from the following: analysis of stress and finite strains, theories of the mechanism of flow and fracture, theory of dislocation, creep, viscosity, visco-elastic behavior, non-Newtonian flow, theories of static and dynamic fatigue, thermo cycling, and fretting corrosion.
- 603. Theory of Elasticity.** (3:3:0) Arr. Prerequisites: Math. 334 and 336 or equivalent. Staff
The mathematical theory of elasticity; analysis of stress and strain; generalized Hooke's Law; uniqueness theorem; special topics in elasticity.
- 621. Thin Shell Structures.** (3:3:0) Arr. Prerequisites: C. E. 424, C. E. 525. Staff
Theory and design methods related to domes, arches, solid plate, and hyper structures.
- 622. Bridge Design.** (3:3:0) Arr. Prerequisites: C. E. 423, 424, and 525. Staff
Design of statically indeterminate bridge structures including composite continuous beams and continuous trusses; design of piers and abutments; AASHTO bridge design specifications.
- 623. Pre-Stressed Concrete.** (3:3:0) Arr. Prerequisite: C. E. 424. Staff
Basic theory, pre-stress and post-stress methods; details of design and fabrication; applications to continuous structures.
- 625. Structural Design of Multi-Story Buildings.** (3:3:0) Arr. Prerequisites: C. E. 423, 424, and 525. Staff
Design loadings and specifications, analysis and design of statically indeterminate structural frames of steel and concrete; elastic and plastic approaches to design.
- 632. Advanced Hydrology.** (3:3:0) Arr. Prerequisites: C. E. 431, 432 or equivalent. Staff
Theory application of advanced hydrologic principles to engineering design and investigations.

- 633. Hydraulic Design of Water Control Structures.** (3:3:0) Arr. Prerequisites: C. E. 432, 531. Staff
Hydraulic and structural design of dams and appurtenant works.
- 641. Advanced Soil Mechanics.** (3:3:0) Arr. Prerequisites: C. E. 441, 542 or equivalent. Staff
Advanced topics in soil mechanics including stress distribution in earth masses, the shearing strength of soils, consolidation theory, settlement analysis, stability of slopes, and the bearing capacity of soils.
- 642. Advanced Soil Mechanics Laboratory.** (2:0:6) Arr. Prerequisites: C. E. 441, 542, or equivalent. Staff
Advanced study in the techniques of laboratory investigations of soils.
- 643. Earth and Rock Fill Structures.** (3:3:0) Arr. Prerequisite: C. E. 542 or equivalent. Staff
Aspects associated with the design and construction of earth and rock fill dams including geological study and erection of dam-sites, location and selection of materials, seepage and pore pressure studies, interpretation and application of shearing strength data, stability analysis and the construction controls.
- 644. Advanced Foundation Engineering.** (3:3:0) Arr. Prerequisite: C. E. 641. Staff
Applied course in foundation engineering including techniques of subsurface investigation, determination of the allowable soil pressures for footings, and the design of spread footings, raft foundation and pile foundation for structures on clays, silts, and sand.
- 645 Structural Foundations.** (2:2:0) Arr. Prerequisites: C. E. 422 and 542 or equivalent. Staff
Structural designs of foundations including spread footings, combined footings, raft foundations retaining structures, driven piles, drilled piles, caisson and cofferdams.
- 691, 692. Civil Engineering Seminar.** (1:1:0 ea.) F. Staff
- 694. Selected Problems in Civil Engineering.** (2:2:0) Arr. Staff
- 697. Research in Civil Engineering.** (2:Arr.:Arr.) F.S. Staff
- 699. Thesis for Master's Degree.** (1-6:Arr.Arr.) F.S. Staff



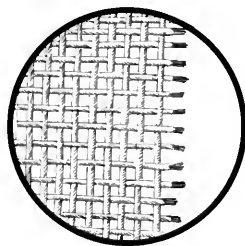
Students working with concrete beam

Clothing and Textiles

Assistant

Professors: Childs (chairman, 3256 SFLC),
Griner, Jorgensen, Lee, Liechty.

Instructor: Domgaard.



The clothing and textiles curriculum is designed to help the student understand clothing as it relates to the needs of individuals and families and to know the implications in commerce. A knowledge of textiles is emphasized as an aid to wise selection and effective use and care of clothes. Expression of creative abilities is encouraged in designing, selection, and construction of clothing.

Careers open to majors in this field vary with individual aptitudes and experience and with the choice of a minor. Professional opportunities are found in demonstration work, dress designing, dressmaking, fashion illustration, fashion merchandising, fashion promotion, garment manufacturing, institutional purchasing, textile designing, textile promotion, textile testing, and theater costuming. Students are also prepared for graduate study leading to college teaching, research, and extension services

Major and Minor Requirements

Majors are required to complete a minimum of 22 credit hours in the department, with at least 3 credits in each of the four areas:

Construction: Clo. and Text. 165, 235, 355

Design and Selection: Clo. and Text. 110, 330, 345, 350

History and Economics: Clo. and Text. 330, 430, 472

Textiles: Clo. and Text. 260, 580

Clo. and Text. 594 or 595 is also expected of senior students.

For graduation from the College of Family Living these hours must be combined with enough credit to make a total of 35 credit hours within the college. At least 12 hours must be outside the major field with a minimum of 3 hours in each of the three departments: family life education, food and nutrition, and housing and home management. Students will also complete general education requirements as prescribed by the University and 14 credit hours in a minor field of study. For graduation with a bachelor of arts degree, 16 hours of language are required; nine hours of science beyond general education requirements are required for a bachelor of science degree. In meeting general education requirements, chemistry is designated as one of the physical sciences and psychology and economics are strongly advised social sciences. Bacteriology is a recommended biological science.

Transfer students should complete at least 10 credit hours of work in this department to qualify for graduation.

Students who choose clothing and textiles for their minor field of study are required to complete 14 credit hours with at least one course in each of the four areas: construction, design and selection, history and economics, and textiles. Men who desire to minor in clothing and textiles should consult the department chairman.

Clothing and textiles majors who are interested in costume design and illustration are advised to minor in art. Recommended courses are Art 110 or 120, 122, 233, 310, or 343, 306, and 362.

Students who are primarily concerned with textile design should complete a minor in art. Art 110, 122, 233, 306, 310, and 362 are advised.

Business management is an appropriate minor for students interested in fashion merchandising, fashion promotion, and institutional purchasing. Recommended courses are Bus. Mgt. 347, 455, 556. Also advised are Bus. Mgt. 315, 420, 455.

Students who combine a clothing and textiles major with a minor in communications are encouraged to elect Commun. 101, 211, Commun. (Adv. and Pub. Rel.) 330, Commun. (Radio and T.V.) 255, 351, 346, and Commun. (Journ.) 471.

Students of theater costume are advised to minor in dramatic arts with the following courses: Dram. Arts 123, 460, 565, 566. Also recommended are Dram. Arts. 676, 678 and Art 110, 233.

Other minors chosen with the approval of the adviser may be more appropriate for students with special interests.

Recommended Sequence of Courses for Majors

Freshman Year		Junior Year	
	Hours		Hours
Relig. 121, 122**	4	Relig.**	4
Eng.**	4-6	Credit toward minor*	6
Phys. Ed.**	1	Hist. 170*	3
Health 130**	2	Art 306	3
Forum and Dev. Assy. 101, 102	1-2	Clo. and Text. 300, 330, 345,	
Clo. and Text. 110*	2	350, 355	Choose 6 to 12 hrs.
Food and Nutr. or HDFR*	2-3	Physics or elective	3
also		also	
For B.A. Candidates:		For B.A. Candidates:	
Lang.*	8	Bot. 101 or Zool. 105*	3
Math. 105 and Chem. 101	7	Hous. and Home Mgt.*	2-3
Or Chem. 101 and 151	8	Psych. or Econ.*	3
For B.S. Candidates:		For B.S. Candidates:	
Clo. and Text. 165*	4	Statistics 221 or elected science	3
Psych. or Econ. 101*	3	Humanities and Fine Arts	
Math. 101 and Chem. 101*	8	elective*	2-3
Or Chem. 101 and 151	10		
Sophomore Year		Senior Year	
	Hours		Hours
Relig.**	4	Relig.*	4
Phys. Ed.	1	Fam. Life Ed. electives	3-6
Forum and Dev. Assy.	1-2	Clo. and Text. 430, 472, 580,	
Clo. and Text. 260*	3	594, 595	(Choose 4-8 hrs.)
Chem. 151 or Physics 100*	3-5	Credit toward minor*	8
Psych. 111 or Econ. 101*	3	Forum and Dev. Assy.	1-2
Bact. 121*	3	Electives	6-11
Eng. Lit.*	3		
Food and Nutr. or HDFR*	2-3		
also			
For B.A. Candidates:			
Lang.*	4		
Clo. and Text. 165*	4		
For B.S. Candidates:			
Bot. 101 or Zool. 105*	3		
Hous. and Home Mgt.*	2-3		
Clo. and Text. 235	2		

Courses

105. **Elementary Clothing Construction.** (1:1:2) F.S. Domgaard
Unit method of clothing construction applied to simply designed cotton articles. A service course for nonmajors with little or no sewing experience.

- 110. Selection and Care.** (2:2:1) (m) Griner, Jorgensen, Lee, Liechty
Design elements related to apparel selection; principles of wardrobe planning and care; personal analysis for self-improvement. Open to men and women students.
- 165. Dress and Pattern Construction.** (4:2:6) F.S. (m) Domgaard, Griner, Jorgensen, Lee, Liechty
Principles of fitting, clothing construction, and flat pattern design applied to a tailored dress and an afternoon or evening dress.
- 235. Children's Clothing.** (2:1:3) F.S. (m) Prerequisite: Clo. and Text. 165
Domgaard, Jorgensen, Lee
Selection, design, and construction of children's clothing as related to the child's developmental needs.
- 260. Textiles.** (3:3:1) F.S. (m) Childs
Natural and synthetic textile fibers; yarns, fabric construction, dyes, and finishes; fundamental considerations in the purchase, use, and care of textile fabrics. Open to men and women.
- 300. Clothing the Family.** (2:2:0) F.S. (m) Prerequisites: at least 3 hours in social science and one class in H.D.F.R. Childs
Physical, social, and psychological needs related to clothing for family members at the various age levels. Coordinating family resources to solve the clothing problems of families. Open to men and women.
- 330. History of Costume.** (2:2:0) F. (m) Prerequisite: some work in economics, sociology, or history. Jorgensen
Social, economic, and political influences on dress through the ages. Analysis of costume as an expression of the life of the people and as a basis for interpreting modern fashions. Open to men and women.
- 345. Draping and Flat Pattern Design.** (3:2:4) F. (m) Prerequisites: Clo. and Text. 110, 165, 260; recommended: Clo. and Text. 330. Liechty
Creative design achieved through techniques of flat pattern and draping on an individualized dress form.
- 350. Costume Design.** (2:2:2) S. (m) Prerequisites: Clo. and Text. 110, 165, 330, 345. Griner
Creative experiences in designing apparel for different production processes and price levels. Resources for inspiration explored.
- 355. Tailoring.** (3:3:3) F.S. (m) Prerequisites: Clo. and Text. 165, 260; recommended: Clo. and Text. 345. Domgaard, Liechty
Custom and commercial tailoring techniques applied to construction of coats and suits.
- 430. Historic Textiles.** (2:2:0) S. (m) Prerequisite: Clo. and Text. 260; recommended: Clo. and Text. 330. Liechty
History of the design and production of fabrics as an expression of man's cultural achievement. Open to men and women.
- 472. Fashion Industry.** (2:2:0) S. (m) Prerequisites: 3 hours in clothing and textiles; 6 hours in economics, sociology, or history. Jorgensen
Development of the fashion movement—its relation to manufacturing and consumption of clothing. Garment production, fashion designers, fashion cycles, and trade organizations. Open to men and women.
- 580. Advanced Textiles.** (3:3:2) S. (m) Prerequisites: Clo. and Text. 260; Chem. 101, 151 or equivalent; Bot. 101 or Zool. 105. Childs
Fiber properties as they are related to molecular structure, morphology, and fine structure of fibers and as these affect fabric performance.
- 594. Special Problems.** (1-2:Arr.:Arr.) F.S. Prerequisites: 15 semester hours in clothing and textiles and permission of instructor. Staff
- 595. Problems in Construction.** (1-2:Arr.:Arr.) F.S. Prerequisites: 15 semester hours in clothing and textiles and permission of instructor. Staff

Communications



Professor: O. R. Smith (chairman, FAC).

**Associate
Professor:** Rich.

**Assistant
Professors:** Burnett, Butterworth, Lindeman,
McKinlay, Tarbox, Williams, Wol-
sey.

Instructor: Fairbanks.

**Special
Instructor:** Anderson.

The professional program in communications includes a broad base of general education, thorough orientation in the processes, functions and responsibilities of mass communication, and the development of skills in fact finding, analysis, and communication through the mass media.

The department also seeks to provide service courses to help students from other departments develop desired communication skills and, in addition, offers the following general education course in the field of humanities and fine arts: Communication 101, Introduction to Mass Communication.

Undergraduate concentrations leading to the degree of Bachelor of Arts are offered in the following areas: Advertising and Public Relations; Journalism (newspaper, magazine, and radio-television journalism); Journalism Teaching; and Radio and Television. Courses are also offered for an undergraduate minor concentration in photocommunication and for a photography technology specialization in the two-year program of the Technical Institute of the University.

Graduate studies are offered leading to the degree of Master of Arts in communication. Graduate students should consult the Graduate School section of this catalog or the Graduate School Catalog.

Curriculum Divisions

Course offerings of the department are grouped in the following divisions: I. Communications (general courses), numbers 101, 211, 307, 490, 491, 495, 524, 526, 528, 536, 550, 580, 611, 612, 680, 691, 692, 694, 699; II. Advertising and Public Relations, numbers 330, 331, 333, 435, 439; III. Journalism, numbers 212, 321, 323, 340, 427; IV. Photocommunications, numbers 365, 67, 368, 371; V. Radio and Television, numbers 255, 346, 351, 352, 449, 453, 456, 458. Undergraduates planning to major in the department will complete the core curriculum as listed below and the prescribed concentration in one of the specialization sequences listed. Those transferring credits from other institutions should confer with the department chairman to determine appropriate evaluation of work taken previously in the major field.

General Education

See "General Education Program" in the Student Academic Services section of this catalog for courses which may be taken to fill prescribed areas in general education requirements for graduation. All majors should take Physics 177 (Physics of Light and Photography) as part of the general education requirement in physical science.

Communications majors are advised to obtain a broad background in the fine arts, humanities, and social sciences. Study of a foreign language for two years or more is recommended.

In filling the general education requirement in American history and government, majors should take Pol. Sci. 110 and either Hist. 121 or Econ. 274. One of these combinations of courses will serve in place of Hist. 170.

Department Core Curriculum

All majors in communications must complete the following core courses in the department, totalling 18 credit hours:

Commun. 101	Introduction to Mass Communication	2 hours
Commun. 211	Basic Writing for the Mass Media	2
Commun. 307	Communication Law	2
Commun. 310	History of Mass Communication	3
Commun. 490	Practices & Problems in Mass Communication	2
Commun. 491	Communications Symposium	1
Commun. 330 (Advg.-Pub. Rel.)	Introduction to Advertising	2
Commun. 212 (Journ.)	Advanced Reporting	2
Commun. 255 (Radio-T.V.)	Introduction to Radio and Television	2
		<hr/> 18 hours

Advertising—Public Relations Concentration

The advertising and public relations concentration provides study leading to professional work in advertising and public relations agencies, newspapers, radio and television stations, and advertising or public relations departments of manufacturing, business, and public institutions. In addition to the core curriculum, each student must complete 12 credit hours in required or elective courses as listed below:

Commun. 331 or 351, 435, 439 (Advg.-Pub. Rel.)	8 hours
Indus. Ed. 250	2 hours
Commun. elective	2 hours
	<hr/> 12 hours

(Total hours including core courses: 30)

Each student will fill a regular 14-hour minor plus a 10-hour minor. One of the two minors must be selected from art, business management, economics, psychology, sociology, or statistics. The other minor may also be from one of the above areas or from any other academic discipline of the University, subject to the approval of the adviser.

Journalism Concentrations

The journalism concentrations are designed to prepare students for work on the news and editorial staffs of daily and weekly newspapers and press services, for magazine writing and editing, for radio and television news and public affairs broadcasting, or for journalism teaching and student publications supervision in secondary schools.

In addition to the core curriculum, each student must complete 12 credit hours in required or elective courses as listed below:

Newspaper Journalism

Commun. 321, 323 or 495 (Journ.)	6 or 7 hours
Indus. Ed. 250	2 hours
Commun. electives	4 or 3 hours
	<hr/> 12 hours

(Total hours including core courses: 30)

Magazine Journalism

Commun. 321, 427, 528 (Journ.)	7 hours
Indus. Ed. 250	2 hours
Commun. electives (495 recommended)	3 hours
	<hr/> 12 hours

(Total hours including core courses: 30)

Broadcasting Journalism

Commun. 340 (Journ.)	2 hours
Commun. 346, 352 (Radio-T.V.)	5 hours
Commun. electives	5 hours
	<hr/> 12 hours

(Total hours including core courses: 30)

Journalism Teaching

Commun. 321, 323 (Journ.).....	6 hours
Electives chosen from Commun. 495, 524, 550; 427 (Journ.); 331, 435 (Adv.-Pub. Rel.); 365 (Photocommun.); 346, 352, 456 (Radio-T.V.).....	6 hours
	<u>12 hours</u>

(Students desiring to prepare for specialization in educational broadcasting should utilize appropriate electives from the foregoing list in completing the journalism teaching requirements for a secondary school teaching certificate.)

(Total hours including core courses: 30)

Each student in newspaper, magazine, and broadcasting journalism will fill a regular 14-hour minor plus a 10-hour minor. One of the two minors must be selected from economics, English, geography, history, political science or sociology. The other minor may also be from one of the above areas or from any other academic discipline of the University, subject to the approval of the adviser.

Each student in journalism teaching will take courses in teacher education and fill one of the teaching minors prescribed in the College of Education section of this catalog.

Radio-Television Concentration

The radio-television concentration is designed to prepare students for administrative positions in program producing, directing, and writing; in commercial station management; and in educational broadcasting operations and management. In addition to the core curriculum, each student must complete 13 credit hours in courses as listed below:

Commun. 346, 351, 352, 449, 456 (Radio-T.V.)	10 hours
Dram. Arts 123	3 hours
	<u>13 hours</u>

(Total hours including core courses: 31)

Supplementary Information

The requirements in the concentrations listed above may be modified to allow for previous experience or individual needs upon permission of the chairman of the department.

In addition to maintaining the minimum grade-point averages required by the academic standards of the University, majors must maintain a grade-point average of 2.5 or higher in all work taken in the department. Not more than 36 credit hours in the department may be included in the undergraduate program unless the student presents more than 128 credit hours for graduation with the baccalaureate degree.

Course offerings are supported by laboratory facilities in the areas of advertising, reporting and editing, photography, and radio and television. Students in advertising and journalism have opportunity to combine their academic programs with staff assignments on the Daily Universe, the campus newspaper.

As a link between the student's academic preparation and his professional career, professional internships are arranged for qualified seniors and graduates. In these internships supervised experience is gained on the staffs of selected newspapers, magazines, radio and television stations, and advertising agencies and offices.

The department sponsors a series of lectures on communications throughout the year to bring students in contact with leading professionals and scholars in the field of communications. Professional activities for students are fostered by departmental clubs and campus chapters of a number of national organizations, including the following: Sigma Delta Chi, professional journalistic society; Alpha Epsilon Rho, professional broadcasting fraternity; Kappa Tau Alpha, journalism scholarship society; and the Advertising Club.

Requirements for a Minor

The general minor in communications includes 14 credit hours selected from the department, preferably from the core curriculum, and one of the concentrations listed above.

The teaching minor in communications (journalism) includes 20 credit hours, with 15 hours from the following courses: Commun. 101, 211, 490, 491; 212, 321, 323 (Journ.); plus 5 hours selected from Commun. 307, 310, 524; 330 (Adv.-Pub. Rel.); 365 (Photocommun.); 255 (Radio-T.V.).

Courses

101. **Introduction to Mass Communication.** (2:2:0) F.S.Su. Home study also. Staff
(G-HA) A survey of the media of mass communication and their functions in modern society: newspapers, magazines, motion pictures, radio and television, advertising, and public relations.
211. **Writing for the Mass Media.** (2:2:1) F.S.Su. Home Study also. Prerequisite: Eng. 112 or equivalent or permission of instructor. Staff
Principles of gathering and writing factual information for mass audiences of readers and listeners. Introduction to specialized forms of mass media writing. (Typewriter use required.)
212. **News Reporting.** (2:1:3) F.S. Prerequisite: Commun. 211. Burnett
News gathering techniques; practice in handling assignments in politics, government, courts, science, law enforcement, and other news areas.
255. **Introduction to Radio and Television.** (2:2:1) F.S.Su. Staff
The role of radio and television in modern society. A study of influences, current practices, and social implications of the American system of broadcasting.
307. **Communication Law.** (2:2:0) F.S. Home Study also. Staff
Legal rights, privileges, and regulations of press, radio, television, and films; principles of libel, contempt, copyright, and right of privacy; decisions of regulatory bodies.
310. **History of Mass Communication.** (3:3:0) F.S.Su. Home Study also. Staff
Development of American press, film, and broadcast media from colonial beginnings to the present, viewed in relation to political, social and economic history of the times.
321. **Copyreading and Editing.** (3:2:3) F.S.Su. Prerequisites: Commun. 212 (Journ.); Indus. Ed. 250. Fairbanks
Copyreading, headline writing, news evaluation, and page makeup for newspapers. The student works with city, suburban, and news service copy.
323. **Practical Reporting and Editing.** (3:1:8) F.S.Su. Prerequisite: Commun. 321 (Journ.). Staff
Supervised experience in reporting, copyreading, and editing assignments on the Daily Universe; individual conferences with instructor.
330. **Introduction to Advertising.** (2:2:0) F.S. Home Study also. Wolsey
Principles of advertising and its role in the American economy; values to advertisers and media. Newspaper, radio, and television advertising are emphasized.
331. **Advertising Copy and Layout.** (2:2:0) S. Prerequisites: Commun. 330, (Adv.-Pub. Rel.); Indus. Ed. 250. Wolsey
Reader interest, sales appeal, and production techniques for advertising in printed media. Students design retail and product advertisements for typical publications.

- 333. Radio and Television Advertising.** (2:2:0) S. Prerequisite: Commun. 330 (Adv.-Pub. Rel.). Wolsey
Advertising principles for broadcast media; study of research, station coverage, and audience measurement. Writing commercials, programs, spot announcements; time buying, production, transcription, and film services.
- 340. Radio and Television News.** (2:2:1) F.S.Su. Prerequisite: Commun. 212 (Journ.). Williams
News preparation and production of newscasts and public affairs programs. Consideration of interviews, documentaries, commentaries, editorials, and special events. Practical and lab experience provided.
- 346. Radio and Television Production.** (3:2:3) F. Prerequisite: Commun. 255 (Radio-T.V.). Staff
Techniques of planning and producing radio and television programs.
- 351. Radio and Television Writing.** (2:2:0) F. Prerequisites: Commun. 255 (Radio-T.V.); Commun. 211 or consent of instructor. Williams
Study of and practice in documentary, dramatic, and continuity writing for radio and television.
- 352. Radio and Television Announcing Workshop.** (1:1:0) F.S. Prerequisites: Commun. 255 (Radio-T.V.); Dram. Arts 123 or consent of instructor. McKinlay
Survey and analysis of announcing in radio and television, and practice in presenting announcing material.
- 365. Press Photography.** (2:1:3) F. Prerequisites: Physics 177 or equivalent; Art 120 or 239. Staff
Principles of photography for newspapers and periodicals; practice in the use of professional equipment for taking and processing news and feature pictures.
- 366. Advertising and Industrial Photography.** (2:1:3) F.S. Prerequisites: Physics 177 or equivalent, Art 120. Staff
Instruction and laboratory practice in photography and layout for newspaper, magazine, and television advertising; industrial and business applications of photography.
- 367. Portrait Photography.** (2:1:3) F. Prerequisites: Art 121, 122, 239; Physics 177. Staff
General portrait studio and darkroom procedures with emphasis on the plastic quality of light on the human head and figure.
- 368. Pictorial Photography.** (2:4:0) S. Prerequisites: Art 121, 122, 239; Physics 177. Staff
Art composition in its application to photography. Exercises in photographing landscapes, still life, and the human figure.
- 371. Introduction to the Motion Picture.** (2:2:1) F. Prerequisites: Physics 177 or equivalent; Commun. 101. Staff
Introduction to documentary film theory, using films to illustrate technique and content. Overview of communication aspects of the cinema. Laboratory exercises in using motion picture cameras.
- 372. Motion Picture Production.** (2:1:3) S. Prerequisite: Commun. 371 (Photo-commun.). Staff
Principles of lighting, lens utilization, camera movement, and shot continuity in producing motion pictures. Laboratory projects using 16 mm motion picture equipment.
- 427. Magazine Article Writing.** (2:2:0) F. Home Study Also. Prerequisite: Commun. 211 or consent of instructor. Wolsey
Planning and writing non-fiction articles for sale to periodicals. Analysis of magazine markets, and criticism of articles written in the course.

- 435. Principles of Public Relations.** (3:3:0) F.Su. Wolsey
Philosophy and practice of public relations in business, governmental, educational, and other institutions. Study of publics, media, methods, press relations, and publicity.
- 439. Advertising Media and Campaigns.** (3:3:0) S. Prerequisites: Commun. 330, and 331 or 333 (Adv.-Pub. Rel.). Wolsey
Research and planning of advertising campaigns as related to national and local objectives; media selection and budgeting; individual project in production of an advertising campaign.
- 449. Radio and Television Programs and Audiences.** (2:2:0) F. Su. Prerequisite: Commun. 346 (Radio-T.V.). Staff
Observation and analysis of basic program forms used in radio and television; examination of effective program structure and appeals; consideration of audience situation and measurement.
- 453. Advanced Radio and Television Announcing Workshop.** (1:0:3) F.S. Prerequisite: Commun. 352 (Radio-T.V.) McKinlay
Laboratory and broadcast practice in presentation of major types of radio and television announcing materials.
- 456. Television Directing Workshop.** (2:1:3) S. Prerequisite: Commun. 346 (Radio-T.V.); Recommended: Dram. Arts 460. Tarbox
Theories and techniques of television directing.
- 458. Radio Directing Workshop.** (2:1:3) F. Prerequisite: Commun. 346 (Radio-T.V.). Staff
- 490. Practices and Problems in Mass Communication.** (2:2:0) F.S. Home Study also. Staff
Comprehensive review of the field of mass communication, including analysis of policies, practices, and problems of the mass media as social instruments. Individual writing projects.
- 491. Communications Symposium.** (1:1:0) F.S. Prerequisite: majors and minors with senior standing. Staff
Lectures by professional communicators and specialists in communication analysis. Student research and writing projects.
- 495. Projects in Communication Practice.** (1-4:0:5-20) F.S.Su. Prerequisites: senior standing and permission of department chairman. Staff
Professional projects or internships for communications majors in advertising, public relations, journalism, radio, television, or photocommunications.
(Students must make application to the department chairman for assignment one semester in advance of the term during which assignment to a project is desired. Projects normally will be assigned on the block plan during the second half of the Fall or Spring Semester or during either term of the Summer Session.)
- 520. Editorial Writing and Interpreting Public Affairs.** (3:2:3) S. Burnett
Study of the opinion and interpretative functions of the mass media of communication. Assignments in editorial writing and depth reporting.
- 524. Teaching Methods in Journalism.** (2:2:0) Su. Prerequisite: Commun. 211 or equivalent. Staff
Teaching methods for journalism in the secondary school and junior college. Planning and supervising school newspapers. Disseminating school publicity in the public media.
- 526. School Yearbook Production.** (2:2:0) Su. (Offered 1964-65 and alternate years) Staff
Planning and supervising production of school yearbooks, including copy, illustration, layout, printing, binding, and business management.

528. **Magazine Editing and Publishing.** (2:2:0) S. Prerequisite: Commun. 321. Staff
Principles of layout and design for magazines and business publications. Contemporary problems in content and production.
536. **Public Relations Case Studies.** (2:2:0) S. Prerequisite: Commun. 435 (Adv.-Pub. Rel.) Staff
Case studies in public relations. Cases are selected from a wide range of actual public relations problems which have confronted business, governmental, educational, and service institutions.
550. **Problems and Practices in Educational Television and Radio.** (2:2:0) S.Su. Rich
Prerequisites: Advanced standing in communications or graduate education. Rich
A study of current problems and practices in the utilization and administration of television and radio in education and other noncommercial applications.
580. **World Communication Channels.** (2:2:0) F. Burnett
Mass communication media in principal areas of the world; problems of international communication and barriers to the flow of information between peoples.
610. **Studies in Communication Theory.** (3:3:0) F.Su. Rich
A study of the historical and philosophical development of communications theory with special application to problems of the mass media.
611. **Research Methods in Mass Communication.** (2:2:0) F.Su. Smith
Research techniques in communication fields, including readership, readability, content analysis, and audience measurement. Introduction to thesis writing.
612. **Mass Communication and Society.** (3:3:0) S.Su. Rich
Concepts of mass communication in contemporary society; critical evaluation of responsibilities and performance of the mass media of press, radio, television, and film.
615. **Propaganda, Public Opinion, and Communications.** (2:2:0) S. Burnett
Roles of the mass media as channels of propaganda and influence upon public opinion. Effects of public opinion on mass communication.
690. **Seminar in Mass Communication.** (1:1:0) F.S.Su. Staff
- 691, 692. **Special Studies in Communication.** (1-3:Arr.:Arr. ea.) F.S.Su. Staff
Individual work on approved problems not leading to a thesis. Projects must be approved before registration.
694. **Readings in Mass Communication.** (1-2:Arr.:Arr.) F.S.Su. Prerequisite: consent of instructor. Staff
699. **Thesis for Master's Degree.** (2-4:Arr.:Arr.) F.S.Su. Staff

Devotional Assemblies

Professor: Herald R. Clark (coordinator, 154 JKB).



(An interdepartmental area only)

Throughout the history of Brigham Young University, students have been privileged to receive special visits from the General Authorities of the Church and hear messages prepared especially for them. At present, devotional assemblies are held weekly on Tuesday mornings. It is planned that during the academic year the students will have the opportunity to hear outstanding Church leaders including members of the First Presidency and the Council of the Twelve Apostles.

Credit for attendance at the weekly devotional assembly may be earned at the rate of one-half semester hour per semester, and such credit may be applied toward the requirement for religion in the following manner: A student who does all of his undergraduate work at B.Y.U. may apply a total of three semester hours of credit toward the religion requirement during his junior and senior years.

Lower Division Courses

- | | |
|--|---------------------------|
| 101, 102. Lectures in Religion. ($\frac{1}{2}$:1:0 ea.) F.S. | Staff and Guest Lecturers |
| 201, 202. Lectures in Religion. ($\frac{1}{2}$:1:0 ea.) F.S. | Staff and Guest Lecturers |

Upper Division Courses

- | | |
|--|---------------------------|
| 301, 302. Lectures in Religion. ($\frac{1}{2}$:1:0 ea.) F.S. | Staff and Guest Lecturers |
| 401, 402. Lectures in Religion. ($\frac{1}{2}$:1:0 ea.) F.S. | Staff and Guest Lecturers |

Dramatic Arts



Professors: Hansen (chairman, FAC), Gledhill, Mitchell.
Associate Professor: Metten.
Assistant Professors: Stewart, Struthers.
Instructors: Golightly, Henson, Warner.
Special Instructor: Crosland.

The Department of Dramatic Arts and the Department of Speech are each administratively independent of the other; however, in order to more completely prepare the student for teaching in the schools and to meet the competition in professional theatre, radio, and television, the faculty members and courses from both departments are utilized to achieve these purposes.

The following courses are required of all majors within both the Department of Dramatic Arts and the Department of Speech:

Dram. Arts 121, 460
Speech 101, 271, 491
Commun. (Radio-T.V.) 255

The High School Teacher.

Those students wishing to qualify as teachers in the high schools will complete the following courses and receive the joint recommendation of the Department of Dramatic Arts and the Department of Speech. The required courses are as follows:

	Hours
Dram. Arts 121, 123, 126, 319 (320-321—2 hours), 325, 460	16
Speech 101, 111, 271, 305, 401, 491, 527	16
Commun. 255 (Radio-T.V.)	2
Total Hours	34

Additional courses recommended:

Dram. Arts 315, 564, 565, 423.
Speech 360, 402, 524 or 525.

Teaching Minor:

Dram. Arts 121, 319, 1 hour from 320 or 321, 325, 460.
Speech 101 or 102, 111 or 305, 491, 527.

Speech 491 is required of all majors and minors in both departments and is taught Spring Semester only. Required courses may be waived only on acceptance of the student's petition by the department waiver committee.

Mask Club is sponsored by both departments to provide practical experience and participation in all of the speech arts. It is held each Monday night from 7:00 p.m. to 8:00 p.m. in College Hall.

Requirements for Minor:

The requirements for a general minor in dramatic arts and speech must be selected from the following courses:

Dram. Arts 121, 319, 1 hour from either 320 or 321, 325, 460.
Speech 101 or 102, 111 or 305, 491, 527.

DEPARTMENT OF DRAMATIC ARTS

The B.A. and M.A. degrees are offered by the department.

AREAS OF CONCENTRATION

Dramatic Arts	Hours
Basic Courses	
Dram. Arts 121, 315, 460	8
Speech 101, 491	5
Commun. 255 (Radio-T.V.)	2
Requirements for specialization:	
123, 126, 319, (320, 321—2 hours), 423, 564, 565	17
Total Hours	32

Additional courses recommended:

Dram. Arts 325, 360, 572, 573.

Speech 305, 527.

Sequence of Courses

	F	S
First Year	101 (3) 126 (1)	121 (3) 123 (3)
Second Year	255 (2)	271 (2)
Third Year	564 (3) 319 (2)	565 (3) 527 (2) 320, 321 (2) 305 (3)
Fourth Year	460 (3) 423 (3)	491 (2)

Courses

- 121. Voice, Diction and Interpretation.** (3:3:3) F.S. (G-HA m) Staff
Practical and general course designed to improve vocal skill and oral reading. Attendance at Monday night Mask Club required.
- 123. Fundamentals of Acting.** (3:3:1) F.S. Crosland, Golightly, Hansen
Basic theories and techniques of acting. Attendance at Monday night Mask Club required.
- 126. Makeup.** (1:1:2) F.S. Warner
Theory and practice of theatrical makeup. Attendance at Monday night Mask Club required.
- 315. Introduction to the Theatre.** (2:2:1) F.S. (G-HA) Gledhill, Metten
Introduces students to fundamental theories of theatre arts, develops a discriminating appreciation, and provides a basic background for those interested in theatre. Attendance at Monday night Mask Club required.
- 319. Stage Craft.** (2:3:0) F.S. (m) Henson, Struthers
Theories and techniques of stage craft. Attendance at Monday night Mask Club required.
- 320, 321. Stage Craft Lab.** (1-3:0:3-12 ea.) F.S. (m) Henson, Struthers
Laboratory application of theories and techniques. Attendance at Monday night Mask Club required.
- 325. Advanced Interpretation.** (2:1:2) S. (m) Gledhill, Hansen
Artistic oral reading in advanced level. Emphasis on dramatic reading, humorous reading, and pantomime.
- 360. Creative Dramatics in the Schools.** (2:2:0) F.S. Mitchell
Directing for audiences of children and youth. Participation in Youth-eatre productions. Attendance at Monday night Mask Club required.

412. **Religious Drama.** (2:2:0) F.S. Hansen
423. **Advanced Acting.** (3:3:1) S. Hansen
Theory in characterization and advanced acting techniques. Attendance at Monday night Mask Club required.
460. **Directing.** (3:3:3) F.S. (m) Gledhill, Metten
Theories and techniques of directing a play. For advanced students only. Attendance at Monday night Mask Club required.
491. **Senior Seminar.** (2:2:1) S. Clinger, Hansen
555. **Theatre Workshop.** (2-4:2-4:2) Summer only. Hansen
Practical production on the graduate level. May be repeated.
564. **Theatre History I.** (3:3:0) F. Hansen
The development of the theatre, covering periods of Primitive, Egyptian, Greek, Roman, medieval, and Elizabethan theatre.
565. **Theatre History II.** (3:3:0) S. Metten
The development of the theatre, covering the restoration period in England, the Western theatre in the 19th and 20th centuries, and the Oriental theatre.
- 572, 573. **Children's Theatre.** (2:2:1 ea.) F. Golightly, Mitchell
Directing for audiences of children and youth. Participation in Youth-eatre productions. Attendance at Monday night Mask Club recommended.
- 577, 578. **Playwriting.** (1-2:1-2:0 ea.) F.S. Hansen, Metten, Mitchell
Advanced techniques and theories.
643. **Methods and Problems of Research in Speech and Dramatic Arts.** (2:2:0) F. Baer, Metten
Required of all graduate students. Should be taken as early as possible.
660. **Theory of Interpretation.** (2:2:0) S. Gledhill, Metten
661. **Oral Interpretation of Classical Literature.** (2:2:0) F.S. Metten, Mitchell
662. **Regional Dialects.** (2:2:0) S. Clinger
663. **Program Building and Lecture Recital.** (2:2:0) F. Gledhill, Metten
667. **History of Acting.** (2:2:0) S. Hansen
Styles and theories from classical to method.
668. **Special Problems in Theatre History.** (1-3:1-3:0) F.S. Staff
Oriental theatre and the free theatres of Europe.
670. **Advanced Play Production—Technical.** (2:2:0) S. Henson
A formal study of the "isms" from the point of view of stage design.
671. **Experimental Theatre.** (2:2:0) F. Hansen
672. **Problems of the Producing Director.** (2:2:0) F. Hansen
673. **Advanced Play Production—Directing.** (2:2:0) S. Hansen
674. **Projects in Theatre.** (1-4:1-4:0) F.S. Hansen, Metten
- 675, 676. **Stage Design.** (2:2:1 ea.) F.S. Henson
678. **Stage Lighting.** (1-2:1-2:0) F.S. Struthers
696. **Seminar in Interpretation.** (1-3:1-3:0) F.S. Gledhill, Metten
697. **Seminar in Arena Theatre.** (1-4:1-4:0) F.S. Hansen
699. **Thesis for Master's Degree.** (1-6;Arr.:Arr.) F.S. Staff

Economics

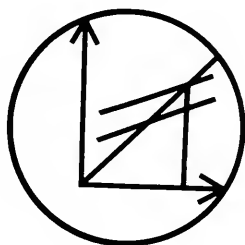
Professors: H. R. Clark, Davies, Nelson.

Associate

Professors: Wirthlin (chairman, 302A JKB),
W. Clark, Doxey, Mangum.

Assistant

Professor: Wimmer.



The philosophy of the department is to provide a liberal background to serve as a basis for entrance into many professional areas. Thus, a minimum of special courses is required, allowing the student considerable flexibility in developing his own program.

Several programs are available to serve students majoring in economics:

1. General business economics—for students desiring to go directly into business.
2. Labor relations and labor economics—for those intending to make labor relations a profession.
3. Preprofessional economic training—for those contemplating entering law school, a graduate school of business, government service, or similar areas of study.
4. Economic theory—for students intending to do graduate work in economics or allied fields.
5. International economics—for those desiring to enter foreign service or engage in international trade.
6. Junior college teaching—for graduate students planning to teach economics in the junior colleges.

Students selecting economics as a minor subject should include Econ. 111, 112, and either 311 or 312 in the required 14 hours.

The bachelor's degree in economics is offered in both the College of Business and the College of Humanities and Social Sciences.

Requirements for a Major in the College of Business

Econ. 111, 112, 274, 311, 312, 453, two of the following: 511, 512, 515; and 12 additional hours in economics.

Statistics 221 and one of the following: a 3-semester-hour course in statistics, Math. 112, or Acctg. 332.

Math. 105 or 111.

The minor requirement should include no fewer than 14 hours in a department in the College of Humanities and Social Sciences. Minors outside the college must be approved by the department.

Requirements for a Major in the College of Humanities and Social Sciences

Econ. 111, 112, 274, 311, 312, 453; two of the following: 511, 512, 515; and 12 additional hours in economics.

Statistics 221 and one of the following: a 3-semester-hour course in statistics, Math. 112, or Acctg. 332.

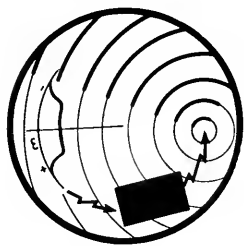
Completion of an approved minor requirement of no fewer than 14 hours.

Courses

- 101. Survey of Economics.** (3:3:0) F.S.Su. Home Study also. (G-SS m) Staff
A one-semester survey course in economics to familiarize students with fundamental principles and to develop an understanding of the critical economic problems facing America and the world today.
- 111. Introduction to Economic Principles and Problems.** (3:3:0) F.S.Su. Home Study also. (G-SS m) Staff
An elementary course in economic principles and problems; emphasis placed upon employment and national income analysis.
- 112. Introduction to Economic Principles and Problems.** (3:3:0) F.S.Su. Home Study also. (G-SS m) Staff
A continuation of Econ. 111. Emphasis placed on the theory of price and its effect on the household, firm, and industry.
- **Geography 231. Economic Geography.** (3:3:0)
- 274. Economic History of the United States.** (3:3:0) F.S.Su. Home Study also. (G-HA m) Davies, Doxey
- 311. Income Analysis.** (3:3:0) F.S.Su. (m) Prerequisites: Econ. 111 and 112. Staff
Intermediate economic theory with emphasis on national income analysis.
- 312. Price Analysis.** (3:3:0) F.S.Su. (m) Prerequisites: Econ. 111 and 112. Staff
Intermediate economic theory with emphasis on price and distribution analysis.
- 341. Comparative Economic Systems.** (3:3:0) S. (G-SS m) Nelson
Analysis and critical appraisal of contemporary economic systems: capitalism, socialism, and communism.
- 358. International Trade and Finance.** (3:3:0) F. (G-SS m) Prerequisites: Econ. 101 or 111, and 112. Doxey
An introduction to the principles and problems of international trade and finance. Special emphasis is placed on their application in the United States.
- 402. Real Estate and Urban Land Economics.** (3:3:0) F. (m) Nelson
Forces of demand and factors of supply of urban land as they relate to real estate credit, rents, prices, and city growth.
- 430. Economic Development.** (3:3:0) S. (m) Prerequisites: Econ. 101 or 111, and 112. Wirthlin
Theory and experience of achieving economic growth in both under-developed and developed economies.
- 453. Money and Banking.** (3:3:0) F.S.Su. (m) Prerequisites: Econ. 101 or 111, and 112. H.R. Clark, Wimmer
Principles of money and banking as related to monetary and banking theory and policy.
- 461. Labor Relations.** (3:3:0) F.S.Su. (m) Davies, Mangum
History of the labor movement collective bargaining, and labor legislation.
- 462. Economics of the Labor Market.** (3:3:0) S. (m) Prerequisites: Econ. 111, 112, and 461 or equivalent. Davies, Mangum
A study of wage theory, manpower utilization, labor market policies, and social welfare programs.
- 471. European Economic History.** (3:3:0) S. (m) W. Clark
Historical development of Europe's economic institutions and their effect on the general history of that continent.

- 482. Introduction to Business Fluctuations.** (3:3:0) F. (m) Prerequisites: Econ. 111 and 112. Nelson
 Analysis of the nature, causes, and control of business and economic fluctuation. Identification of the problems of instability as it relates to forecasting economic activity and growth of the economy.
- 488. Introduction to Econometrics.** (3:3:0) F. (m) Prerequisites: Econ. 111 and 112, Math. 105 or 111, Statistics 221; or by consent of the instructor. Staff
 A study of the mathematical techniques and methods employed to give empirical content to the a priori reasoning in economics which is quantifiable.
- 501. Workshop on Economic Education.** (3:Arr.:Arr.) Su. Staff
 (Continuous for three weeks.)
- 511. Theory of Income, Employment, and the Price Level.** (3:3:0) F. (m) Wirthlin
- 512. Theory of Price.** (3:3:0) S. (m) Wirthlin
- 515. History of Economic Thought.** (3:3:0) F. (m) Davies
- ☐ **Geography 522. Urban Geography.** (2:2:0)
- ☐ **Agricultural Economics 525. Production Economics.** (2:2:0)
- 530. Advanced Economic Development.** (3:3:0) F. (m) Wirthlin
- ☐ **Geography 533. Industrial Geography.** (3:3:0)
- 535. Economic Problems of Asia.** (3:3:0) S. (m) Staff
- 558. International Trade and Finance.** (3:3:0) S. (m) Doxey
- 575. Government Finance.** (3:3:0) F. (m) Wimmer
- 576. Government and Business.** (3:3:0) S. (m) Mangum
- ☐ **Agricultural Economics 580. Agricultural Policy.** (2:2:0)
- 589. Mathematical Economics.** (3:3:0) F. (m) Prerequisites: Math. 105 or 111, Statistics 221, Econ. 311 and 312; or by consent of the instructor. Staff
 A study of the application of mathematical tools to the quantifiable (not necessarily quantitative) elements of economic theory.
- 590. Advanced Economic Problems.** (1-2:Arr.:Arr.) F.S.Su. (m) Staff
- 594. Seminar in Economic History.** (2:2:0) F. (m) Doxey
- 617. Contemporary Economic Thought.** (2:2:0) S. (m) Staff
- 682. Business and Economic Fluctuations.** (2:2:0) S. (m) Nelson
- 688. Econometrics.** (2:2:0) S. (m) Prerequisites: Econ. 488 or Statistics 331 and Math. 213, Econ. 311 and 312. Staff
 An advanced course in econometrics in which the use of calculus, matrix algebra, etc. is employed to analyze the quantifiable theorems of economic theory.
- 692. Seminar in Monetary and Fiscal Policy.** (2:2:0) S. (m) Prerequisite: Econ. 311. Wimmer
- 693. Seminar in Comparative Economic Systems.** (2:2:0) F. (m) Nelson
- 694. Seminar in Labor Economics and Labor Relations.** (2:2:0) S. (m) Prerequisite: Econ. 461. Davies, Mangum
- 696, 697. Research.** (Arr.) F.S.Su. Staff
- 699. Thesis for Master's Degree.** (Arr.) Staff

Electrical Engineering Science



Professor: Jonsson

Associate Professors: Monson (chairman, 175 ELB), Clegg.

Assistant Professors: Berrett, Chaston, Miner*, Watts and Woodbury*.

This department offers a professional program leading to the degree of Bachelor of Engineering Science in electrical engineering. Graduate work is also offered leading to advanced degrees. Subject fields included are communications, acoustics, analog and digital computers, solid state theory, electronics, energy conversion, systems and circuits, measurements, and automatic control. Communications includes concepts applicable to radio, television, radar, telephony, telegraphy, and audio systems; electronics includes the study of vacuum tubes, transistors and other solid state devices; energy conversion includes the study of generating equipment, motors, distribution equipment, power systems, industrial electronics, and illumination; automatic control includes servo-mechanisms, control devices, and system theory.

Education at B.Y.U. places emphasis on the basic science foundations of mathematics, physics, and chemistry. This means that most of the electrical engineering courses are taught on an advanced science level. The student is also provided with a well-balanced program of social, religious, biological science, and humanistic studies.

The extensive background of the faculty will prove valuable to those who wish to undertake special projects in their undergraduate work or research topics in their graduate work. Seminar work and participation in technical meetings sponsored by student organizations provide a rich beginning to a professional career in electrical engineering. Professional opportunities in this field are many and exist in research, development, design, sales and application engineering, teaching, and business management.

Entrance Requirements

For both the general entrance requirements of the University and the particular requirements specified for the College of Physical and Engineering Sciences, see those sections of this catalog. The student first enrolls in a pre-engineering course. This is outlined in the College of Physical and Engineering Science section. After completion of this work and upon application by the student to the Electrical Engineering Department, his record will be reviewed. If his work has been satisfactory he will then be admitted to the three-year professional curriculum in electrical engineering.

Grade Requirements

See the College of Physical and Engineering Science section of this catalog for grade requirements for admission to the professional school.

A cumulative average grade of "C" or better must be maintained in each area of mathematics, physics, and engineering subjects; otherwise, the student is placed on a probationary status in the department. No more than six hours of "D" credit in the Electrical Engineering Department will be counted toward graduation.

Requirements of Major and Options

To obtain a degree in electrical engineering, the student must complete the course work outlined below. Students enrolled in the air science program will

normally be required to spend an extra summer to finish their program. A special program outline is available at the department office indicating the sequence of courses for air science students. Six hours of restricted elective credit which must be taken can be chosen from the following courses: Acctg. 342; Bus. Mgt. 348, 521; Econ. 461; E.E. 511, 512, 516, 517, 523, 528, 531, 537, 542, 545, 562, 567, 570; any acoustics course; Psych. 330, 336; and other approved courses in mathematics, physics, and statistics.

Under special conditions one or two of the regular course requirements may be waived upon suitable substitutions. For example, an acoustical option is available wherein some acoustics courses are substituted for others normally required.

It is possible for students during the last year of the program, upon suitable prior application, to take course work that may be applied to a graduate degree. The total overall load under this arrangement must not exceed 16 credit hours.

The following abbreviations are used: Ch.E. for chemical engineering, C. E. for civil engineering, E. E. for electrical engineering, and M. E. for mechanical engineering.

General Education Group Requirements

Engineering science students are subject to all of the general education requirements listed in this catalog, with the following exceptions and comments:

- (1) They may take the required course in health any time during the first or second year.
- (2) The biological science requirement may be reduced to four semester hours instead of the six semester hours specified. All of these may be obtained in a single course if desired.
- (3) In the program as listed below maximum advantage has been taken of the three hours of religion credit given for attending devotional assemblies for a period of three years.
- (4) It is particularly recommended that the student take Econ. 101 and Psych. 111 in satisfying the social science group requirement.

Engineering students may register for 18 hours, exclusive of physical education, forum, and devotional, in any one semester without obtaining special permission from the dean of the college.

NORMAL SEQUENCE OF COURSES FOR MAJORS

Preengineering Program

See the College of Physical and Engineering Science section of this catalog.

Professional School of Electrical Engineering

First Year Professional (Third Year)			Second Year Professional (Fourth Year)		
	F	S		F	S
Math. 313, 336	3	3	E.E. 431, 432	4	3
E.E. 300*	1		E.E. 441, 442	4	4
E.E. 311, 312	5	5	E.E. 461		5
E.E. 321		4	E.E. 591		1
E.E. 350		4	C.E. 304	3	
Ch.E. 378	3		M.E. 320, 310	3	3
Physics 315	3		Group Electives	3	
Relig.	3	2			
<hr/>			<hr/>		
Total Hours	18	18	Total Hours	17	16

*E.E. 523, taken during the fourth or fifth year, may be taken in lieu of E.E. 300. Two credit hours of E.E. 523 will count toward restricted electives.

Third Year Professional (Fifth Year)		F	S	E.E. 411	2	
E.E. 462	3			C.E. 303		3
E.E. 467	2			Hist. 170		3
E.E. 541	4			Group electives	2	7
E.E. 592	1			Restricted electives	3	2
				Total Hours	17	15

Courses

- 300. Computer Techniques.** (1:0:2) F.S. Prerequisites: Physics 213, Math. 334. Staff

An introduction to (1) digital computer programming using single address and alphanumeric (algo) techniques and (2) the scaling and simulation of physical system on an analog computer, as applied to engineering problems.

- 301, 302. Elements of Electrical Engineering.** (4:3:3 ea.) F.S. Prerequisites: Physics 211, 213; Math. 334; concurrent registration in Math. 313. Staff

For students not majoring in electrical engineering. Study of electrical and magnetic circuit theory, electronics, and electrical machinery.

- 311, 312. Linear Circuit Analysis.** (5:4:3 ea.) F.S. Prerequisites: Physics 213; Math. 334; concurrent registration in Math. 313, 336. Staff

Transient and steady-state linear circuits based on complex variables and Laplace transform. Signal flow graphs and operational diagrams are included.

- 321. Electrical Measurements.** (4:3:3) S. Prerequisites: Physics 211, 213; concurrent registration in E.E. 312.

The theory use, limitations, accuracy, and calibration of bridges, potentiometers, indicating, recording, and digital instruments; and the application of analog and digital operations to electrical measurements and instrumentation.

- 350. Solid State Electricity.** (4:4:0) S. Prerequisites: Ch.E. 378, Statistics 321, Physics 315; Math. 313; concurrent registration in E.E. 312, Math. 336.

Physical properties of crystalline solids, lattice vibration and energy dielectrics, conduction, band theory, semiconductors, emission, magnetism, resonance, and relaxation phenomenon.

- 411. Feedback Concepts.** (2:2:0) S. Prerequisites: C.E. 304 or C.E. 302; Math. 336; and either (a) E.E. 432 and E.E. 442 or (b) E.E. 302.

Consideration of basic feedback concepts as applied to engineering systems. Root-locus, log magnitude, and phase criteria are presented as useful tools for analysis and design.

- 431, 432. Electrical Energy Conversion.** (4:4:0, 3:2:3) F.S. Prerequisites: E.E. 312, 350, 321.

Magnetic circuits and magnetic amplifiers, single phase and polyphase transformers; energy conversion principles, d.c. and a.c. motors and generators; control system components.

- 441, 442. Electronic Circuits and Devices.** (4:3:3: ea.) F.S. Prerequisites: E.E. 312, 350, 321. Staff

The physical characteristics of solid state devices and tubes with applications applied to rectification, power supplies, basic and pushpull amplifiers, oscillators, and feedback circuits.

- 461. Electromagnetics.** (5:5:0) S. Prerequisite: concurrent registration in E.E. 442. Staff

The general transmission line and transmission networks; static and dynamic electric and magnetic fields using classical and vector mathematics; wave guides, antennas, wave propagation, generators.

- 462. Communication Circuits.** (3:3:0) F. Prerequisite: E.E. 461 Staff
Circuits and systems used in radio, television, and radar including microwave hardware and network theory.
- 467. Communications Laboratory.** (2:0:6) F. Prerequisites: E.E. 461; concurrent registration in E.E. 462. Staff
Devoted to building and testing circuits studies and designed in parallel theory courses.
- 511, 512. Network Synthesis.** (3:3:0 ea.) Arr. Prerequisites: E.E. 312, 411. Staff
Designed to present the basic theory for the synthesis of 2-terminal and 4-terminal networks. Various basic approaches are enumerated and applied to ladder and lattice types of filter networks. Insertion loss and phase shift characteristics and means of meeting such requirements.
- 516. Servomechanisms.** (3:3:0) Arr. Prerequisite: E.E. 411. Staff
Application of design principles, carrier systems, component description and specification, multiloop problems including signal flow graphs and synthesis.
- 517. Digital and Sampled-data Control Systems.** (3:3:0) Arr. Prerequisite E.E. 411. Staff
Basic theory and techniques for the analysis and design of digital and sampled-data control systems and related problems based on the Z-transform method.
- 523. Digital Computer Engineering.** (3:2:3) Arr. Prerequisite: fourth year standing as an engineer. Staff
The logical design and operation of digital computers.
- 528. Analog Computer.** (2:2:0) Arr. Prerequisite: E.E. 302 or 442. Staff
Theory and operation of summing, integrating, and differentiating circuits; function generators and operational amplifiers and their applications to analog computers. Also the application of signal-flow graphs to the analysis and simulation of analog computer systems.
- 531. Power Systems.** (2:2:0) Arr. Prerequisite: E.E. 432. Staff
The analysis and design of electrical power distribution systems and a study of electrical power distribution system protection.
- 538. Advanced Control Machinery Laboratory.** (1:0:3) S. Prerequisite: E.E. 411.
This course constitutes a block of experiments in the area of machinery control systems, machinery characteristics, and power distribution methods.
- 541. Switching, Timing, and Pulse Circuits.** (4:3:3) F. Prerequisite: E.E. 442. Staff
Passive and active circuits utilizing tubes, transistors, diodes, and other devices.
- 542. Advanced Electronic Devices and Circuits.** (3:3:0) S. Prerequisite: E.E. 541. Staff
Consideration is given to lumped instantaneous circuits including switching, memory, shaping, and generation.
- 545. Advanced Amplifier Circuits.** (3:3:0) F. Prerequisite: E.E. 442. Staff
Considers many different devices used in amplifier circuits.
- 562, 563. Advanced Communication Theory.** (3:3:0 ea.) F.S. Prerequisite: E.E. 462. Watts
Transmission through electric networks, periodic sampling, pulse modulation, analysis of information—transmission systems, and noise considerations.

- 567. Advanced Communications and Electronics Laboratory.** (1:0:3) S. Pre-requisite: E.E. 462. Staff
Each of these courses constitutes a block of experiments in the area of U.H.F. techniques, electronic circuits, communication systems, pulse forming networks, transmission lines and filters. Registration is permitted for either course or both courses simultaneously.
- 570. Illumination.** (2:2:0) Arr. Prerequisites: E.E. 312, 441. Monson
Principles and design of artificial illumination for various applications; lamp characteristics; measurements; costs.
- 580. Elements of Acoustics.** (2:2:0) Arr. Prerequisite: fifth year standing in electrical engineering.
Fundamentals of sound production, transmission, and reception with an introduction into sound application in public address and other engineering systems.
- 581. Psycho-Acoustics.** (5:5:0) Arr. Prerequisite: E.E. 442. Staff
Speech and hearing from a communication engineering viewpoint. Analysis of speech and hearing processes is developed. Known experimental facts about speech and hearing are systematically studied and compared with calculated results. Methods of calculating and measuring articulation index of talker-listener pair when using any specified type of communication system.
- 584. 585. Advanced Musical Acoustics.** (2:2:0 ea.) Arr. Prerequisites: Physics 561, 562, or E.E. 580. Monson
Technical study of acoustical behavior of different musical instruments; consideration of sound power output of single instruments and ensembles; stereophonic reproduction of music; possibilities of electronic musical instruments.
- 587. Architectural Acoustics.** (3:3:0) Arr. Prerequisites: Physics 561, 562 or E.E. 580. Monson
Fundamental behavior of sound in rooms; effects of shape and size on perception of speech and music; proper use of public address and sound reinforcing systems, sound absorption and insulation properties of different kinds of room walls; kind and amounts of sound absorption materials to use in sound treatment of rooms and auditoriums.
- 591, 592. Seminar and Field Trips.** (1:0:3 ea.) F.S. Prerequisite: fifth year standing in electrical engineering. Staff
Student and faculty presentation of special topics and subjects of current interest; visits to industries displaying varied types of electrical engineering applications. Participation on the annual field trip is required.
- 598. Special Problem.** (Arr.) F.S. Staff
Registration by permission of professor sponsoring problem. A maximum of two credit hours may be applied toward filling the restricted elective requirement.
- 618. Nonlinear Analysis.** (3:3:0) Arr. Prerequisite: E.E. 516. Jonsson
Consideration of second order nonlinear differential equations; problems of discrete systems, design in the phase plane; adaptive control systems; dynamic programming.
- 619. Nondeterministic Control Systems.** (3:3:0) S. Prerequisite: E.E. 516. Jonsson
Statistical design principles, decision theory, competitive situation, queuing systems, and linear programming as applied to control systems.
- 623. Advanced Digital Computers.** (3:3:0) S. Prerequisites: E.E. 523, 541. Bartholomew
Advanced theory and operation of digital computers and their design and application to engineering, scientific, and control problems.

645, 646. Microwave Devices. (3:3:0 ea.) F.S. Prerequisites: E.E. 661, 662 concurrently. Staff

Consideration is given electronic and solid state devices which have particular application to the propagation, attenuation, modification, and detection of frequencies at and above the S-band.

661, 662. Advanced Electromagnetic Fields. (3:3:0 ea.) F.S. Prerequisite: E.E. 461 or equivalent. Staff

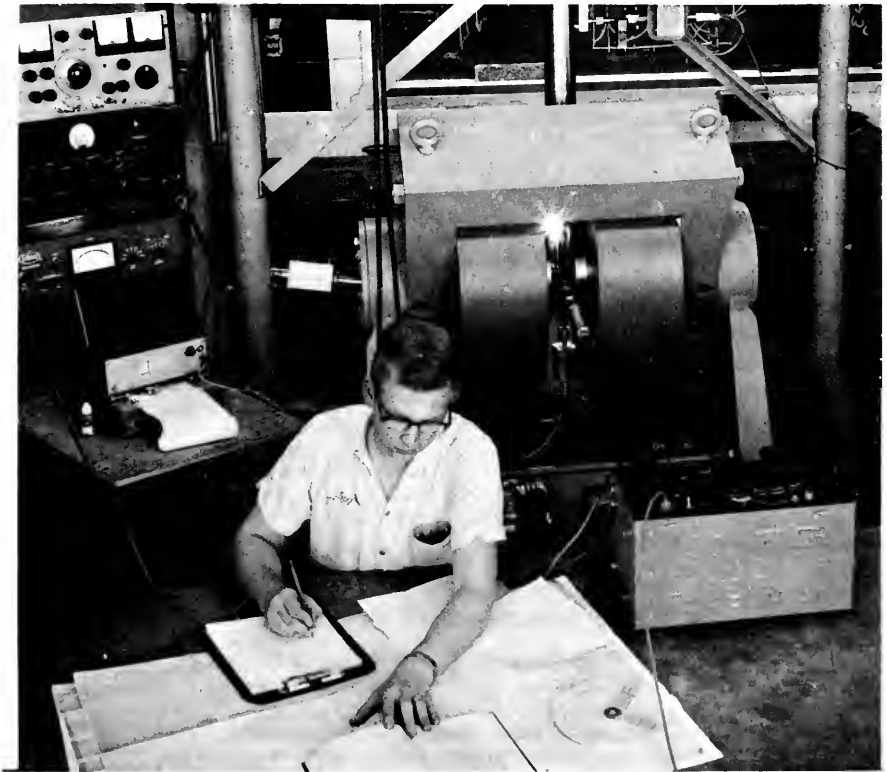
Advanced problems of wave propagation, reflection, and transmission; static and dynamic boundary value problems including general coordinate systems and conformal transformations; power losses in electromagnetic systems and resonant cavity perturbations by approximation techniques. Topics in wave patterns, impedance functions and radiation applied to transmission lines and antennas.

697. Master's Candidate Research. (1-4:Arr.:Arr.) Arr. Staff

698. Readings and Seminar. (1:1:0) F. Prerequisite: graduate standing. Staff

It is expected that every graduate student will make a literature study and report the results of such readings, outlining his proposed problem at a seminar with other graduate students and faculty before commencing his research and thesis.

699. Thesis for Master's Degree. (1-6:Arr.:Arr.) Arr. Prerequisite: graduate standing. Staff



Electrical engineering students at work in laboratory

English

Professors: B. Clark (chairman, 303 McKay), M. Clark, Britsch, Christensen, Farnsworth, Hart, Jacobs, Larson, Spears, West, Young.

Associate Professors: Carroll, Cheney, Ellsworth, Tanner, Thomson, Wood.

Assistant Professors: Cox, Craig, Evans, Gassman, Grass, J. S. Harris, McKendrick, Mitchell, Morrell, Olson, Smart, J. Thomas, R. Thomas, Waterstradt.

Instructors: Alder, M. Allen, P. Allen, Bell, Best, Blair, Blanch, Cracroft, Davis, J. B. Harris, Hayes, Heuston, Hill, Horton, Howe, Hyde, Kump, MacKay, Madsen, McNeil, Merrell, Nielsen, Parker, Ream, Ridenhour, Tate, C. Taylor, J. Taylor, Thayer, Wahluquist, Wight.

Special Instructors: Ballantyne, Bennion, Hall.



Freshman English

(Soren Cox, coordinator)

All students are required to take freshman composition during both semesters of the freshman year unless they are excused by the coordinator of freshman English.

Placement Test. Freshmen are assigned to English classes on the basis of performance on the American College Test.

Freshman Composition. To satisfy the University requirement for freshman composition, all students must complete one of the following sequences: Eng. 111 (or 110), 112; or Eng. 115, 116; or Eng. 118. Students who demonstrate a need for remedial work take Eng. 110, 112; students who demonstrate satisfactory ability take Eng. 111, 112; students who demonstrate exceptional ability take Eng. 115, 116; students in the Honors Program take Eng. 118; students who demonstrate ability below that expected of college freshmen are required to take Eng. 10 and to pass satisfactorily a departmental test before registration in freshman composition.

Requirements for an English Major

All students majoring in English should complete at least thirty-five semester hours in English beyond freshman composition. The following program is prescribed:

	Hours
A. Eng. 251, Fundamentals of Literature	3
B. Eng. 221, English Grammar	3
With the approval of the department chairman and the student's departmental adviser, a student who demonstrates unusual mastery of the principles of grammar may substitute Eng. 325, 421, 426, or 529 for Eng. 221.	
C. Eng. 361 or 362, American Literature	4

- | | |
|--|-----|
| D. Eng. 371 or 372 or 373. Early English Literature | 3-4 |
| E. Eng. 374 or 375. Later English Literature | 4 |
| F. Eng. 382 or 582. Shakespeare | 3 |
| G. Eng. 490. Senior Seminar for English Majors | 2 |
| H. At least two courses selected from the following: Engl. 332, 333, 335, 336, 338, 341, 342, 343, 350, 355, 356, 359, 366, 367, 380, 381, 420, 450. | |
| I. Sufficient additional courses chosen in consultation with the student's departmental adviser to bring the total in English to at least thirty-five semester hours. (Note: All English courses numbered in the 300, 400, and 500 levels may be counted toward the thirty-five hour total except Engl. 377 and 479, which count as education courses; but only the following courses numbered below 300 may be counted: Engl. 215, 216, 218, 221, 251.) | |

The program for English majors is sufficiently flexible that a student not only may elect a traditional emphasis in English literature, but, if he chooses, may emphasize American literature or contemporary literature and creative writing or comparative literature or English language. A booklet entitled **The English Major at B.Y.U.** outlining these programs is available on request.

The department provides a minimum reading list which the English major should obtain and begin to employ early in his academic program. During the semester prior to his graduation, he will be given a departmental examination based on the reading list, the senior seminar, and his over-all major program.

In addition to the requirements listed above, each English major is expected to complete at least twelve semester hours, or the equivalent, of college credit in one foreign language. All graduating English majors will be awarded the Bachelor of Arts degree.

Special Note to Majors Graduating in 1965. The program outlined above will be required of all English majors graduating in 1966 or later. Majors graduating in 1965 should follow the program outlined in the 1962-64 catalog.

Requirements for a Teaching Major in English

The requirements for a teaching major in English and for the regular major are exactly the same except that the student completing a teaching major should take the courses required for teacher certification as outlined by the College of Education.

English is one of the subjects comprising the composite major in language arts designed for prospective teachers. (See College of Education.)

Recommendation on a Minor to Be Selected by English Majors

In filling the University requirement for a minor, an English major may either (1) complete a regular departmental minor in any department of the College of Humanities and Social Sciences or the College of Fine Arts and Communications, or in philosophy or library science, or (2) complete a composite minor by selecting at least twenty semester hours from the following courses: Anthropol. 111 and 241; Art 306, 307, 405, and 501; Dram. Arts 315; Hist. 304, 307, 335, and 373; Humanities 101; Commun. 101 and 410; Lib. Sci. 111, 370, and 572; Linguistics 325; Music 103, 484, and 485; Phil. 380, 381, 385, 470, 471, 475, 476, and 477; Pol. Sci. 301; Psych. 510 and 550; Sociol. 552. Hist. 335, the History of England, is especially recommended. Any exceptions in the minor program for English majors must be approved by the chairman of the English Department.

Requirements for a Minor in English

Students planning a teaching minor in English should complete Eng. 221, 275, 276, 277, and sufficient electives to make the total work in English beyond freshman composition at least twenty semester hours. Other students minoring in English may select from the courses approved for a minor any combination of courses totaling at least fourteen semester hours beyond freshman composition. Such courses should be selected in consultation with the student's major department adviser and, if desired, the English Department staff.

Graduate Work in English

For qualified students seeking the M.A. degree in English, attractive scholarships, fellowships, and part-time teaching assistantships are available. Inquiries regarding these should be addressed to the chairman of the English Department.

A graduate student may major in either English or American literature; he may minor in a subject outside the English Department or in English literature, American literature, comparative literature, or English language. In addition, he should complete the University requirements for the Master of Arts degree, which is the only graduate degree offered in the English Department. He should have reading proficiency in at least one foreign language, preferably French or German.

Among the thirty hours required for a Master of Arts degree, each student must take the following courses:

	Hours
A. Eng. 615. Bibliography and Methods of Research	2
B. Eng. 624. Old English	3

The following courses should also be included if the student did not have such courses as an undergraduate:

A. Eng. 421 or 621. The History of the English Language	3
B. Eng. 450 or 650. Literary Criticism	3

In fulfilling the thesis requirements for a master's degree in English, a student may select any one of the following three options:

- (1) One long thesis on a topic demanding research, criticism, or both;
- (2) Three long papers written in three different areas of English or American language or literature and on topics demanding research, criticism, or both;
- (3) Two long papers written in two different areas of English or American language or literature and on topics demanding research, criticism, or both; and one long paper in the area of imaginative writing.

The work done under any of the above three options is under the direction of the student's advisory committee and must fulfill all of the requirements of form, date of submission, and binding that apply to a regular master's thesis.

The department stipulates that two hours of "B" grade or better in the series of Eng. 318 and 319, or the equivalent directed experience in writing, be regarded as prerequisite for application to use imaginative writing as part of option (3) listed above. With this application, the student must forward to the graduate committee in English samples of his best writing in order that the committee may determine whether he is qualified to use imaginative writing as part of his thesis requirement.

General Education Courses in Literature

An undergraduate student filling his general education requirement in literature in the humanities and fine arts area may take any literature course for which he has the proper background and prerequisites. See also Humanities 101.

Courses

10. **Preparatory English.** (0:2:0) F.S. Cox, Staff

Drill in essentials of English for all students not prepared for Eng. 110 or 111. Students who complete course must pass a departmental test before registering for Eng. 111.

15. **Remedial English for Juniors.** (0:3 for $\frac{1}{2}$ semester:0) F.S.Su. Staff

Intensive review of the essentials of composition for students who have failed the Junior English Proficiency Examination. (Fee \$15.00)

- 55, 56. **English for Bilingual Students.** (0:5:0 ea.) F.S. Mitchell, Staff

Service course for foreign students who are learning English. (This course may not be used to fill the freshman English requirement.)

- 99. **Problems in Thesis Writing.** (0:2:0) F.S.Su. Britsch, Evans, Staff
110. **Composition and Reading.** (3:5:0) F.S. Cox, Staff
Same course and credit as Eng. 111, but meets two additional days a week for the first half of the semester. For students who need special help in freshman composition.
- 111, 112. **Composition and Reading.** (3:3:0 ea.) F.S.Su. Home Study also. Cox, Staff
Course in reading and writing designed for development of skills of effective writing, of critical awareness of the resources of the language, and of skill in reading rapidly and critically. Review of grammar, readings, weekly themes, and long library paper.
- 115, 116. **Composition and Reading.** (2:2:0 ea.) F.S. Cox, Staff
Alternate course to Eng. 111, 112 designed for students who show superior ability and training in composition.
118. **Composition and Reading.** (3:3:0) F.S. Cox, Staff
Accelerated course in freshman English for students in the Honors Program. Registration by special permission only.
215. **Expository Writing.** (2:2:0) F.S. (m) Prerequisite: Eng. 112, 116, or 118. Hill
Basic composition course intended to develop clarity, precision, and style in factual writing.
216. **Technical Writing.** (2:2:0) F.S. (m) Prerequisite: Eng. 112, 116, or 118. J. S. Harris
Composition course intended to develop accuracy and skill in writing scientific pamphlets, articles, reports, and memoranda.
218. **Creative Writing.** (2:2:0) F.S.Su. Home Study also. (m) Prerequisite: Eng. 112, 116, or 118. Larson, Thayer, Staff
Composition course intended to develop expressive skill and power through writing of short stories, poems, dramas, and/or informal essays.
221. **English Grammar.** (3:3:0) F.S.Su. Home Study also. (m) Prerequisite: Eng. 112, 116, or 118. Britsch, Staff
225. **Vocabulary Building.** (2:2:0) F.S.Su. Home Study also. (m) Staff
Service course intended to develop an effective vocabulary through study of prefixes, suffixes, and roots.
250. **Introduction to Literature.** (3:3:0) F.S.Su. Home Study also. (G-HA m) Prerequisite: Eng. 112, 116, or 118. Howe, Staff
Various types of literature—short story and novel, poetry, essay, biography, and drama—with a critical reading and analysis of significant examples of each type.
251. **Fundamentals of Literature.** (3:3:0) F.S.Su. Home Study also. Prerequisite: Eng. 112, 116, or 118. B. Clark, Staff
Basic course in literary appreciation and criticism, literary terminology, and interpretive writing. Required of all English majors and recommended for humanities majors and for students in the Honors Program. Should be taken in the sophomore year.
252. **Introduction to Poetry.** (2:2:0) F.S. (G-HA m) Evans, Hart, Larson
Appreciation course in poetry, emphasizing critical reading and analysis of significant poems of various types.
253. **Introduction to Drama.** (2:2:0) F.S. (G-HA m) Craig, Tanner, Waterstradt
Appreciation course in drama, with attention given to various forms—tragedy, comedy, farce, melodrama, and modern problem play—and with a critical reading of famous examples of each type.

- 254. Introduction to Biography.** (2:2:0) S. (G-HA m) Young
Short biographies of some famous statesmen, patriots, adventurers, scientists, inventors, painters, writers, and others, including Hitler, Napoleon III, George III, Edison, Wilson, Jefferson, Lincoln, Goethe, Gauguin, the Curies, John Brown, and Dolly Madison.
- 256x. Classic Myths.** (3) Home Study only. Carroll
The characters and stories in classical mythology in their relationship to literature and to modern culture and life.
- 260. Masterpieces of American Literature.** (3:3:0) F.S.Su. Home Study also. (G-HA m) Prerequisite: Eng. 112, 116, or 118. Thomson, Staff
Selected readings in American literature from colonial times to the present.
- 270. Masterpieces of English Literature.** (3:3:0) F.S.Su. Home Study also. (G-HA m) Prerequisite: Eng. 112, 116, or 118. Gassman, Staff
Selected readings in English literature from medieval times to the present.
- 275, 276. Survey of English Literature.** (5:5:0 ea.) F.S.Su. (m) Prerequisite: Eng. 112, 116, or 118. Waterstradt, Staff
Critical survey of English literature from Beowulf to the present, emphasizing major literary works, language development, and interpretive writing. Intended especially for teaching minors in English.
- 277. Survey of American Literature.** (4:4:0) F.S.Su. (G-HA m) Prerequisites: Eng. 112, 116, or 118 and 275. Evans, Waterstradt, Staff
Critical survey of American literature from colonial times to the present, emphasizing major literary works and interpretive writing. Intended especially for teaching minors in English.
- 282. Shakespeare.** (2:2:0) F.S.Su. Home Study also. (G-HA m) Grass, Staff
Appreciation course in Shakespeare, with an interpretive reading of about eight of his great dramas.
- 318, 319. Advanced Creative Writing.** (2:2:0 ea.) F.S.Su. Home Study also. (m) Prerequisite: Eng. 218 or special permission of the instructor. Larson
Composition course intended to give experienced student writers opportunity to further develop their skills in writing poetry, fiction, and drama.
- 325. Introduction to Linguistics.** (2:2:0) S. (m) Blair, Staff
For course description see Linguistics 325, under Department of Languages. Registration may be for linguistics, English, or anthropology credit.
- 332. The English Novel from Defoe through Dickens.** (3:3:0) F.S. Home Study also. (G-HA m) Brady, B. Clark, Gassman
English prose fiction from the beginnings to the mid-nineteenth century, with emphasis on Defoe, Richardson, Fielding, Smollett, Sterne, Scott, Austen, Trollope, Thackeray, the Brontes, and Dickens.
- 333. The Modern English Novel.** (3:3:0) F.S. Home Study also (G-HA m) Brady, B. Clark
The English novel from the mid-nineteenth century to the present, with emphasis on George Eliot, Meredith, Hardy, Conrad, Bennett, Galsworthy, Lawrence, Maugham, Joyce, Woolf, Huxley, and several contemporary novelists.
- 335. The American Novel to Dreiser.** (2:2:0) F.S. Home Study also. (G-HA m) Jacobs, Smart, Staff
Nineteenth century American novelists, with emphasis on Cooper, Hawthorne, Melville, Twain, Howells, and James.
- 336. The Modern American Novel.** (2:2:0) F.S. Home Study also. (G-HA m) M. Clark, Ellsworth, Jacobs, Staff
Twentieth century American novelists, with emphasis on Dreiser, Cather, Lewis, Hemingway, Faulkner, Steinbeck, Wolfe, Fitzgerald, Dos Passos, and Warren.

338. **The European Novel.** (3:3:0) F. (G-HA m) M. Clark
The works of the principal European novelists, including Cervantes, Flaubert, Zola, Turgenev, Dostoevsky, Tolstoy, Mann, Kafka, and others.
341. **English Drama to 1642.** (2:2:0) F. (G-HA m) Craig, Young
Religious drama of the Middle Ages, court plays, and popular drama of the Renaissance, excluding Shakespeare.
342. **Restoration and Eighteenth Century Drama.** (2:2:0) S. (G-HA m) Craig, Gassman
English drama from 1660 to 1800, with emphasis on high comedy, sentimental comedy, and heroic tragedy.
343. **Modern English and American Drama.** (2:2:0) F.S. (G-HA m) Craig, Tanner, Waterstradt
Major English and American dramatists since 1890.
- 346x. **Greek Life and Drama.** (2) Home Study only. Carroll
Ancient Greek mythology and civilization and selected dramas by Aeschylus, Sophocles, Euripides, and Aristophanes.
350. **The Bible as Literature.** (2:2:0) F.S.Su. Home Study also. (G-HA m) Ellsworth, Olson, Smart, R. Thomas
355. **World Classics.** (3:3:0) F.S.Su. (G-HA m) Britsch, Craig, Staff
Greek and Roman epic and drama and European classics of the Middle Ages and Renaissance, in translation, with emphasis on Homer, Aeschylus, Sophocles, Euripides, Virgil, and Dante.
356. **World Classics.** (3:3:0) F.S.Su. (G-HA m) Britsch, Larson, Staff
European masterpieces of neoclassicism, romanticism, realism, naturalism, and symbolism in translation.
359. **The Short Story.** (2:2:0) F.S.Su. Home Study also. (G-HA m) Cheney, B. Clark, Staff
Critical study of selected great short stories—American, English, and European—with emphasis on 20th century stories.
361. **Early American Literature.** (4:4:0) F.S.Su. (G-HA m) Jacobs, Thomson, Staff
From the beginnings through writers of the mid-nineteenth century.
362. **Later Nineteenth Century American Literature.** (4:4:0) F.S.Su. (G-HA m) Ellsworth, Jacobs, R. Thomas, Thomson, Staff
From the mid-nineteenth century to the end of the century.
366. **Modern Poetry.** (2:2:0) S. Home Study also. (G-HA m) Hart, Larson
Major English and American poets of the 20th century. May not be taken for credit by students who have had Eng. 380.
367. **English and American Folk Ballads.** (2:2:0) F. (G-HA m) Cheney
English and Scottish ballads and American folk songs.
371. **English Literature to 1500: the Medieval Period.** (3:3:0) F.S.Su. (G-HA m) McKendrick
English literature from its beginnings to 1500, with emphasis on its relationship to other European literatures.
372. **English Literature from 1500 to 1660: the Renaissance Period.** (4:4:0) F.S.Su. (G-HA m) Larson, J. Thomas, Wood, Young
English drama, poetry, and prose of the Renaissance Period, including Milton but excluding Shakespeare.
373. **English Literature from 1660 to 1780: the Neo-Classical Period.** (4:4:0) F.S.Su. (G-HA m) Craig, Gassman, Hart
English literature from the Restoration through the Augustan Age of Reason to the beginnings of Romanticism, including works of Defoe, Swift,

Fielding, Dryden, Pope, and Johnson.

374. **English Literature from 1780 to 1832: the Romantic Period.** (4:4:0) F.S.Su.
Home Study also. (G-HA m) Cheney, B. Clark, Tanner
English literature of the Age of Romanticism, including works of
Burns, Blake, Wordsworth, Coleridge, Scott, Lamb, Byron, Shelley, Keats,
and the Brontës.
375. **English Literature from 1832 to 1900: the Victorian Period.** (4:4:0) F.S.Su.
(G-HA m) Britsch, B. Clark, Farnsworth
English literature of the middle and later 19th century, including works
of Carlyle, Ruskin, Tennyson, Browning, Arnold, Dickens, Thackeray,
George Eliot, the Rossettis, Fitzgerald, Morris, Swinburne, Meredith, Hop-
kins, Wilde, Hardy, and Housman.
377. **Secondary Teaching Procedures.** (3:3:3) F.S. Prerequisites: Eng. 221, 251;
and Tchr. Ed. 301 West
For course description and fee, see Tchr. Ed. 377.
380. **Twentieth Century Literature.** (5:5:0) F.S.Su. (G-HA m) M. Clark, Staff
American, English, and some continental literature, with emphasis on
American. May not be taken for credit by students who have had Eng. 366.
381. **Chaucer.** (3:3:0) S. (G-HA m) McKendrick
382. **Shakespeare.** (3:3:0) F.S.Su. (G-HA m) Britsch, Young, Staff
From six to eight major plays studied intensively.
420. **Literature for Adolescents.** (2:2:0) S.Su. (m) Hayes
Critical examination of the body of literature written for adolescent
readers and of effective methods of teaching literature in the secondary
schools. Intended especially for English teaching majors and minors.
421. **History of the English Language.** (3:3:0) F.Su. (m) Cox, McKendrick
Descriptive study of the English language in the various stages of
its development, with background of related historical events.
426. **Semantics.** (2:2:0) F. (m) Evans, R. Thomas
Function of words in written and spoken communication.
450. **The Criticism and Appreciation of Literature.** (3:3:0) S.Su. (m) R. Thomas
Critical theories and standards of value.
479. **Secondary Student Teaching.** (4-8:1:20-30) F.S. Prerequisite: Eng. 377.
McKendrick, West
For course description and fee, see Tchr. Ed. 479.
490. **Senior Seminar for English Majors.** (2:2:0) F.S.Su. B. Clark, Staff
495. **Individual Readings.** (1-2:2-8:0) F.S.Su. Staff
Available only to English majors and students on foreign tours.
- 500-509. **Eminent American Writers.** (1:1:0 ea.) F.S.Su. Staff
Different writers are treated each year in this series.
- 510-519. **Eminent English Writers.** (1-2:1-2:0 ea.) F.S.Su. Staff
Different writers are treated each year in this series except that Mil-
ton, numbered 512, is taught once every year.
529. **Structure of American English.** (3:3:0) F.Su. Cox
Application of the methods of linguistic science to the description of
the phonology, morphology, and syntax of American English.
572. **European Literature of the Renaissance.** (3:3:0) F. Evans, Spears
A comparative study of continental European literature of the Renais-
sance in its relations to English literature.

573. **European Literature of the 17th and 18th Centuries.** (3:3:0) S. (Not offered 1965-66) Evans, Spears
A comparative study of continental European literature of the 17th and 18th centuries in its relations to English literature.
574. **European Literature from 1760 to 1850.** (3:3:0) F. (Not offered 1964-65) Farnsworth, Spears
A comparative study of the romantic movements in England, Germany, France, Spain, and Italy.
575. **European Literature from 1832 to 1914.** (3:3:0) S. (Not offered 1964-65) Farnsworth, Spears
A comparative study of English, German, French, Spanish, and Russian literature of this period, including naturalism, realism, and symbolism.
582. **Extended Readings in Shakespeare.** (3:3:0) F. Young
Extensive study of the body of Shakespeare's works.
615. **Bibliography and Methods of Research.** (2:2:0) F.S.Su. Gassman, Larson
621. **Problems in the English Language.** (3:3:0) S.Su. McKendrick
624. **Old English.** (3:3:0) F.S.Su. McKendrick, Young
625. **Beowulf.** (2:2:0) S. McKendrick, Young
626. **Middle English.** (2:2:0) F. McKendrick
631. **The English Novel.** (3:3:0) F.Su. Brady, B. Clark
635. **The American Novel.** (3:3:0) S.Su. M. Clark, Jacobs, Smart
641. **The English Drama.** (3:3:0) S.Su. Craig
650. **Literary Criticism.** (3:3:0) F.Su. Hart, M. Clark
661. **Colonialism and Puritanism in American Literature.** (3:3:0) S.Su. Jacobs, Thomson
662. **Romanticism in American Literature.** (3:3:0) F.Su. R. Thomas
664. **Realism and Naturalism in American Literature.** (3:3:0) F.Su. M. Clark, Jacobs, Staff
669. **Teaching English in the Secondary Schools.** (2:2:0) F.Su. West
671. **The Medieval Period in English Literature.** (2:2:0) S.Su. McKendrick
672. **The Renaissance in English Literature.** (3:3:0) F.Su. Larson, Wood, Young
673. **Neo-Classicism in English Literature.** (3:3:0) S.Su. Gassman, Hart
674. **Romanticism in English Literature.** (3:3:0) F.Su. Cheney, B. Clark
675. **The Victorian Age in English Literature.** (3:3:0) S.Su. B. Clark, Farnsworth
680. **Seminar in Modern Literature.** (3:3:0) F.Su. M. Clark, Hart, Larson
682. **Seminar in Shakespeare.** (3:3:0) S.Su. Hart
691. **Research in Folklore.** (2:2:0) S. Cheney
Directed study and research in folk tales, folk poetry, etc., especially as they are related to the Mormon heritage and tradition.
695. **Individual Readings in English.** (1-2:1-4:0) F.S.Su. Staff
699. **Thesis for Master's Degree.** (1-6:Arr.:Arr.) F.S.Su. Staff

Family Life Education



Professors: Porter (chairman, 1239 SFLC), Cannon, Knowles, Moss.

Associate Professor: Rollins.

Assistant Professors: Barlow, Barnett, Laws, V. Poulson.

Instructors: Huff, Jensen, Larsen, Orrock, Peterson, Taylor, Tyndall, Valentine.

Special Instructor: Loosli.

This department of the College of Family Living has as its principal function the preparation of teachers for nursery school, elementary school, secondary school, and college. Other professional opportunities include work in child guidance centers, child welfare and family service agencies, community family life education programs, and many others. Preprofessional training is offered in the areas of family life research and marriage and family counseling.

The focus of the curriculum is on the family, with attention given to the life cycle and the needs of family members of all age levels. Two options are possible, and these are described under their headings in alphabetical order. The options are

1. Homemaking Education.
2. Human Development and Family Relationships (H.D.F.R.).

Food and Nutrition

Professors: Bennion (chairman, 2218 SFLC),
Morris.

Instructor: Turner.

**Special
Instructor:** Bryner.



The Department of Food and Nutrition is organized to help the student understand the basic principles which underlie the role played by food in the maintenance of optimum health and the preparation of food of high culinary and nutritive quality. Application of principles is made through the planning, preparation, serving, and evaluation of attractive and nourishing family meals and through the preparation and evaluation of single items under experimentally controlled conditions. The selection of food to meet human nutritional needs is justified theoretically and practically.

Courses in this department provide training for such professional fields as hospital dietetics, public health nutrition, school lunch or restaurant administration, test kitchen work, food demonstration, college teaching, and research.

The courses in this department are planned to be of value to both men and women.

For majors in food and nutrition a minimum of 24 credit hours in the department is required. For graduation from the College of Family Living these hours must be combined with enough credits in the college to total 36 hours. Included in these 36 hours shall be a total of 12 hours from the following departments with at least three hours in each: clothing and textiles, housing and home management, and family life education.

Suggested Program

Food and Nutrition Major

Freshman		Hours	Junior		Hours
Relig.	4		Relig.	4	
Eng.	6		Hist. 170	3	
Phys ed. & health	3		Chem. 384, 385	5	
Zool. 105	3		Physics 100	3	
Psych. 111	3		Hous. & Home Mgt. 335	3	
Food & Nutr. 115	2		H.D.F.R. 210	3	
Chem. 101, or 100 and 105	5-6		Clo. & text.	3	
Math. 105 or 111	3-5		Food & Nutr. 335	5	
Total Hours	29-32		Food & Nutr. 340, 370	4	
			Electives	2-3	
Sophomore		Hours	Total Hours		35-36
Relig.	4				
Phys. ed.	1				
Zool. 261, 262, or 263	4-5				
Art	2				
Econ. 101	3				
Humanities & fine arts	2-3				
Chem. 151	5				
Bact. 331	5				
Food & Nutr. 264, 265	5				
Electives	2				
Total Hours	33-35				
Senior		Hours			
Relig.	4				
Humanities & fine arts	2-3				
Food & Nutr. 455, 590	5				
Other food & nutr. courses	6				
Other fam. liv. courses	3				
Electives	11-12				
Total Hours	31-33				

Students preparing for a dietetic internship must elect Food and Nutr. 380, 470, and 472; Acctg. 201; Psych. 330; Tchr. Ed. 304 or Psych. 460.

A postgraduate internship of twelve months is required for positions in hospital dietetics. Certain centers have been approved by the American Dietetic Association to give internship training. A list of these centers, as printed by the American Dietetic Association, is available in the office of the department chairman.

If a student plans to extend his college education in food and nutrition beyond the bachelor's degree, the following undergraduate program is advised.

Suggested Program

Preparation for Graduate Work in Food and Nutrition

Freshman		Junior	
	Hours		Hours
Relig.	4	Relig.	4
Eng.	6	Hist. 170	3
Phys. ed. & health	3	Chem. 351, 354, 384, 385	10
Chem. 105, 106	8	Food & Nutr. 264, 265	5
Math. 111	5	Zool. 261, 263	4
Zool. 105	3	Hous. & Home Mgt. 335	3
Food & Nutr. 115	2	Clo. & text.	3
Psych. 111	3	Humanities & fine arts	2-3
Total Hours	34	Food & Nutr. 340	2
		Total Hours	36-37
Sophomore		Senior	
	Hours		Hours
Relig.	4	Relig.	4
Phys. ed.	1	Bact. 331	5
Chem. 223	5	Other fam. liv. courses	3
Physics 201, 202	8	Food & Nutr. 335, 370, 455, 464, 590, 594, or 595	16-17
Art	2	Electives	5-7
Econ. 101	3	Total Hours	33-36
Humanities & fine arts	2-3		
H.D.F.R. 210	3		
Electives	4-6		
Total Hours	32-35		

Students preparing for positions in business should elect Commun. 101 (Journ.), Speech 101 or 102, and Tchr. Ed. 406.

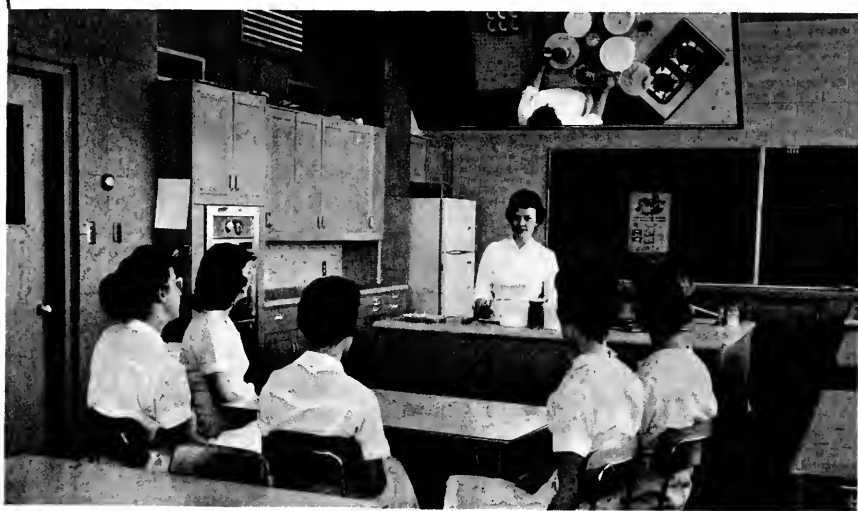
Additional courses recommended for students in food and nutrition are An. Sci. 225, Bact. 361, and Hous. and Home Mgt. 250.

Courses

- 110. Introductory Food and Nutrition.** (2:1:2) F.S. Fee: \$4.00 Staff
Open to all students. Accepted techniques of food preparation for maximum retention of nutritive value are taught through lecture and laboratory experiences.
- 115. Essentials of Nutrition.** (2:2:0) F.S.Su. Home Study also. (m) Staff
Basic concepts of human nutrition and their application in achievement and maintenance of optimum health.
- 245. Nutrition of Mother and Child.** (2:2:0) F.S. (m) Prerequisite: Food & Nutr. 115. Turner
The nutritional needs of expectant mothers, infants, and children, and the proper choice of food to meet these needs.
- 255. Fundamentals of Nutrition.** (5:4:2) F.S. (m) Prerequisites: Zool. 105 or 261; Chem. 151. Morris
For nonmajors. Majors should elect Food & Nutr. 115 and 335.
Basic concepts of human nutrition at all ages. Achievement and maintenance of optimum health for all family members.

264. **Introduction to Experimental Foods.** (3:3:0) F.S. (m) Prerequisites: Chem. 151; Bact. 121 or 331; concurrent registration in Food & Nutr. 265. Bennion
An experimental approach is used to gain an understanding of the purpose of ingredients and procedures used in the preparation of some common foods. The underlying theory of and practice in the preservation of foods is included.
265. **Introduction to Experimental Foods, Laboratory.** (2:0:6) (m) Prerequisite: concurrent registration in Food & Nutr. 264. Bennion
310. **Food Patterns of Various Cultures.** (2:1:3) F. (m) Prerequisites: Food & Nutr. 110 or 264 and 265. Fee: \$4.00 Bryner
The social, religious, economic, and aesthetic significance of food customs of various cultures.
335. **Chemistry of Nutrition.** (5:4:2) S. Prerequisites: Food & Nutr. 115; Zool. 261; completion of or concurrent registration in Chem. 384, 385. Morris
Application of scientific principles to the study of nutrition.
340. **Meal Management.** (2:1:3) F.S. (m) Prerequisites: Food & Nutr. 115 or 255; 264, 265. Fee: \$5.00 Bryner
Organization and management of time, energy, and finances in planning and preparing family meals.
370. **Quantity Food Preparation and Service.** (2:1:2) F. (m) Prerequisites: Food & Nutr. 110 or 264 and 265; or special permission. Staff
Introductory course—standard techniques, procedures of preparation and service to large groups. Planning menus and quantities of food to be purchased.
380. **Quantity Food Purchasing.** (2:2:0) F. Prerequisites: Completion of or concurrent registration in Food & Nutr. 370; Food & Nutr. 264, 265. Staff
Principles and methods of buying food for various types of institutions with emphasis on specifications and factors affecting quality and food cost control. Field trips required.
455. **Diet Therapy.** (3:2:2) S. Prerequisite: Food & Nutr. 335. Staff
The role of nutrition in times of stress and special need and as a therapeutic aid in treatment of disease.
464. **Experimental Foods.** (3:2:3) F. Prerequisites: Food & Nutr. 264; Chem. 384, 385. Bennion
Application of scientific principles to food study. Development of methods used in solving experimental food problems.
470. **Advanced Quantity Food Production.** (2:1:3) S. Prerequisites: Food & Nutr. 370 and 380. Staff
Standard methods of quantity food production, menu planning for institutions, food costs, and experience in food service.
472. **Food Management in Institutions.** (3:2:3) S. Prerequisite: completion of or concurrent registration in Food & Nutr. 470. Staff
Management of financial and personnel problems; experience in food service units on Brigham Young University campus and in school lunch kitchens.
475. **Institution Equipment and Layout.** (2:2:0) S. Prerequisite: completion of or concurrent registration in Food & Nutr. 470 or permission of instructor. Staff
Planning of institutional kitchens; the selection and maintenance of equipment and furnishings with emphasis on materials, construction, and specifications. Field trips required.
590. **Readings in Food and Nutrition.** (1-2:1-2:0) S. Prerequisites: 10 credit hours in food and nutrition or consent of instructor. Bennion

594. **Special Problems in Food.** (1-2:0:3-6) Arr. Prerequisite: permission of instructor and chairman of department. Bennion
For students who have completed at least 12 hours in food and nutrition including Food & Nutr. 590. Independent study of a special problem in food under direction of an instructor.
595. **Special Problems in Nutrition.** (1-2:0:3-6) Arr. Prerequisite: permission of instructor and chairman of department. Morris
For students who have completed at least 12 hours in food and nutrition including Food & Nutr. 590. Independent study of a special problem in nutrition under direction of an instructor.
635. **Advanced Human Nutrition.** (3:3:0) F. (Offered 1965 and alternate years). Prerequisite: Food & Nutr. 335 or equivalent. Morris
An advanced study of the principles of human nutrition.
645. **Advanced Child Nutrition.** (2:2:0) S. (Offered 1966 and alternate years). Prerequisites: Food & Nutr. 335 or equivalent. Morris
664. **Science and Experimental Foods I.** (3:3:0) F. (Offered 1964 and alternate years). Prerequisite: Food & Nutr. 464. Bennion
Protein foods; simple colloidal systems, gels, emulsions, and foams.
666. **Science and Experimental Foods II.** (3:3:0) S. (Offered 1965 and alternate years). Prerequisite: Food & Nutr. 464. Bennion
Enzymes in food; carbohydrates and lipid food materials.
690. **Seminar in Food.** (1-2:1-2:0) Arr. Bennion
691. **Seminar in Nutrition.** (1-2:1-2:0) Arr. Morris
695. **Methods of Research in Nutrition.** (2:1:5) Arr. Prerequisite: Food & Nutr. 635. Staff
696. **Methods of Research in Foods.** (2:1:5) Arr. Prerequisite: Food & Nutr. 664 or 666. Staff
697. **Research.** (1-3:Arr.:Arr.) F.S. Staff
699. **Thesis for Master's Degree.** (2-4:Arr.:Arr.) Bennion, Morris



Food and nutrition class demonstration

Forum Assemblies

Professor: Herald R. Clark (coordinator, 154 JKB)



(An interdepartmental area only)

In 1958 Brigham Young University inaugurated a weekly series known as forum assemblies. The purpose of the assemblies is to bring to our campus men and women of recognized pre-eminence in their chosen fields and to hear their stimulating messages. Among those appearing in years past were Gen. Carlos Romulo, Ogden Nash, Margaret Mead, and others of similar stature.

One-half hour credit per semester or one hour per year may be earned by registering for and attending a minimum of eleven forums each semester. Attendance is based on the honor system. Forum assembly credit may be carried above the normal class load. Grading, on a "pass" basis, will have no effect on grade-point average. Students must register for forum assemblies on the basis of their standing as freshmen, sophomores, juniors, or seniors. All students are encouraged to attend these provocative, intellectually rewarding assemblies.

Lower Division Courses

- 101, 102. Lectures in Contemporary Civilization.** ($\frac{1}{2}$:1:0 ea.) F.S.
Forum Lecturers
Open to freshman students only.
- 201, 202. Lectures in Contemporary Civilization.** ($\frac{1}{2}$:1:0 ea.) F.S.
Forum Lecturers
Open to sophomore students only.

Upper Division Courses

- 301, 302. Lectures in Contemporary Civilization.** ($\frac{1}{2}$:1:0 ea.) F.S.
Forum Lecturers
Open to junior students only.
- 401, 402. Lectures in Contemporary Civilization.** ($\frac{1}{2}$:1:0 ea.) F.S.
Forum Lecturers
Open to senior students only.

Geography



Associate Professor: Layton (chairman, 167 D, HGB).
Assistant Professors: Grey, Millett, Tuttle.
Instructor: Horiuchi.

A major in geography provides training for a variety of employment opportunities. Graduates are engaged in teaching and in various positions in business and industry. They also work in planning, intelligence, cartography, and other government employment. The undergraduate major is designed to provide a general background which may lead into any of these fields. Students seeking employment in business, industry, or government agencies should usually anticipate some post-graduate work, either an academic program leading to an advanced degree or one of many in-service training programs offered by these employers.

Training in geography is also of value to students from other fields. The survey courses offer a broad, overall view of the earth and its problems. The advanced courses may be used to reinforce areas of major interest in terms of a particular part of the world or to learn techniques used by geographers in analysis of distribution of various physical or cultural features.

Students majoring in geography may fill their general education requirements with either the twelve semester hours of one foreign language or with the nine semester hours of credit in mathematics, statistics, logic and science. Students planning to seek employment in professional cartography should take at least twelve semester hours of mathematics. Those planning to become area specialists should choose the language option. All majors must select courses from the above group in consultation with their departmental adviser.

The following courses are required for a major:

Lower division: Geog. 101, 211, 231; Geol. 101 and 102 or 111.

Upper division: Geog. 351, 401, 504, 598; at least two of the following regional courses: 455, 460, 470, 475, 480; at least two of the following systematic courses: 411, 522, 533; and electives in geography to make a total of 30 hours.

It is suggested that a minor in geography include Geog. 101 and 120. The remaining eight hours should be chosen from the courses marked **m** that are most closely related to the major field.

Courses

101. Introduction to Geography. (3:3:0) F.S. Home Study also. (G-SS **m**) Staff

A general survey of the distribution of and processes concerned with the different factors of man's natural environment, i.e. landforms, climate, soils, natural resources.

120. Geography and World Affairs. (3:3:0) F.S. Home Study also. (G-SS **m**) Staff

A survey of the world stressing the human and economic geography of major political regions. Of special interest to all students who wish to broaden their knowledge of the problem areas of the world today.

153. **Geography of Utah.** (2:2:0) S. Layton
The distribution of climates, landforms, vegetation, agriculture, mining, manufacturing, and service industries as related to present population and future growth patterns in Utah.
211. **Introduction to Maps and Air Photos.** (2:1:2) F.S. (m) Layton
Maps and air photos as tools for teaching and research. Sources of maps and photos and practice in their use.
231. **Economic Geography.** (3:3:0) F.S. Home Study also. (G-SS m) Staff
A brief survey of the world's resource pattern. Origin, importance, and movement of major agricultural and mineral commodities in world affairs.
305. **Physiography of North America.** (2:2:0) S. (m) Prerequisite: consent of instructor. Millett, Tuttle
The characteristics of the landforms and the processes which brought them into being.
312. **Map Drawing.** (2:0:4) S. (m) Layton
Maps as a means of recording information. Methods of illustrating various types of data and preparation of maps for reproduction and publication.
332. **World Mineral Resources.** (2:2:0) S. (m) Prerequisite: Geog. 231. Layton
Geography of reserves, production, and uses of the world's major metallic and nonmetallic minerals.
351. **North America.** (3:3:0) F.S. Home Study also. (G-SS m) Tuttle
The United States and Canada including climates, landforms, natural resources, agriculture, and industries.
401. **Geography of Climates.** (2:2:0) F. (m) Prerequisite: Geog. 101 or consent of instructor. Tuttle
The elements, controls, distribution, and classification of the climates of the earth.
441. **Political Geography.** (3:3:0) F.S. (G-SS m) Horiuchi
The physical, political, economic, and social elements of political geography and analysis of the power structure of the world's major powers.
455. **Latin America.** (3:3:0) F. Home Study also. (m) Layton
Physical and cultural geography of the nations of South and Middle America.
460. **Europe.** (3:3:0) S. Home Study also. (G-SS m) Millett
The land and how man is utilizing the natural and human resources of Europe. Emphasis on human geography of major political regions.
470. **Asia.** (3:3:0) F. (m) Horiuchi, Tuttle
Geography of one-third of the earth and two-thirds of its people. Man's use of his natural environment.
475. **Africa.** (3:3:0) F. (m) Staff
Systematic regional treatment of physical, economic, political, and cultural geography of Africa.
480. **Australia and New Zealand.** (2:2:0) F. (m) Staff
- 490. **491. Readings.** (1:1:0 ea.) F.S. Staff
For majors only or by permission of department chairman.
- 493. **Special Problems.** (1-2:1-2:0) F.S. Staff
For majors only.
501. **Principles of Geography** (3:3:0) S. Tuttle
Designed to present information required for the teaching of geography.

504. **Geographic Field Techniques.** (2:1:2) S. Millett
For majors only.
522. **Urban Geography.** (2:2:0) F. (m) Layton
Distribution of urban areas, their development, internal land use patterns, and functions in the world's economy.
533. **Industrial Geography.** (3:3:0) S. (m) Prerequisite: Geog. 231. Layton
A systematic analysis of location patterns of major industries in the United States; raw materials, power resources, and other factors in industrial location.
552. **United States.** (2:2:0) S. (Not offered 1964-65) Prerequisite: Geog. 351. Tuttle
A concentrated study of various phases of the geography of the U.S. Considerable research and reporting by individual students is required.
556. **South America.** (2:2:0) S. Prerequisite: Geog. 460. Layton
557. **Caribbean Area.** (2:2:0) (Not offered 1964-65) Prerequisite: Geog. 455. Layton
561. **Western Europe and the Mediterranean.** (2:2:0) (Not offered 1964-65) Prerequisite: Geog. 460. Staff
A comprehensive study of the systematic and regional geography of non-Communist Europe.
562. **U.S.S.R. and Its Satellites.** (2:2:0) Prerequisites: Geog. 460 or 470 or consent of instructor. Staff
A concentrated study of the physical features, resources, agriculture, industries, and distribution of peoples.
571. **Orient.** (2:2:0) F. (Not offered 1964-65) Prerequisite: Geog. 470 Staff
A comprehensive study of the systematic and regional geography of the Orient.
580. **Geography of Underdeveloped Areas.** (2:2:0) F. Prerequisite: consent of instructor. Staff
Physical, economic, and human geography as it affects the world's underdeveloped areas, with emphasis on future development possibilities.
- History 585. **Historical Geography of the U.S.** (2:2:0) Layton
598. **Seminar.** (1:1:0) Arr. Staff
601. **Physical Geography.** (2:1:2) F. Staff
620. **Cultural Geography.** (2:1:2) S. Staff
- 690, 691. **Readings.** (1:1:0 ea.) F.S. Staff
For graduate students only.
695. **Special Problems.** (1-2:1-2:0) F.S. Staff
- 696, 697. **Research.** (2:2:0 ea.) F.S. Staff
698. **Graduate Seminar.** (1:1:0) Arr. Staff
699. **Thesis for Master's Degree.** (1-4:Arr.:Arr.) F.S. Staff

Geology and Geological Engineering Science

Professors: Hintze (chairman, 290 ESC), Bissell, Bullock, Hansen, Rigby.

Associate

Professors: Bushman, Hamblin, Phillips.

Assistant

Professor: Brimhall.*

Curator: Jensen.



Geology, a science of great diversification, offers attractive career possibilities to students whose interests range over much of the physical and biological sciences. For example, the student inclined to the life sciences may choose a career in paleontology or paleobotany and may work for a petroleum company, state or federal geological survey, research institution or museum, or educational institution; the student who favors chemistry may choose mineralogy or geochemistry and may work for the foregoing types of organizations as well or for industrial, mining, or mineral exploration firms. Geophysics is an important field of learning as evidenced by the recent International Geophysical Year, and the student who favors physics may specialize in nuclear geophysics, geomagnetism, meteorology, or many other fields. The students preparing to teach in public schools may choose a composite major or minor (see composite major in index) in geology.

An ideal balance between indoor and outdoor work, opportunity for wide travel, somewhat better than average salaries, and circumstances favorable for scholarly and scientific work are some of the appealing features of the profession.

Geological science is currently passing through a period of rapid change, and the emerging trend is that geologists are supplementing classical observation methods with mathematical and statistical methods of analysis. The geologist is becoming more closely associated with the chemist, the physicist, and the engineer as the technological age unfolds.

The four-year program in geology consists of a core curriculum required of all students (see outlines below) which emphasizes the rudiments of geology, chemistry, biology, mathematics, and physics. Such training affords maximum flexibility for work opportunities upon graduation. Ideally, however, the capable student should look beyond the bachelor's degree to one or more years of postgraduate work at B.Y.U. or another institution. Students planning ahead for graduate work in geology can best prepare themselves for graduate specialization by taking undergraduate course work in foreign language and in fields of science other than geology. Thus, students pursuing careers in geochemistry, paleontology, or geophysics should plan to take more than the minimum number of courses, particularly in their supporting fields of study, chemistry, mathematics, biology, or physics. Successful completion of the core curriculum plus electives chosen in consultation with the departmental adviser prepares the student for graduate work in these fields at leading universities of the country.

It is expected that a student majoring in geology shall have met the general entrance requirements of the College of Physical and Engineering Sciences. All students majoring in geology are required to complete the following courses (or their equivalents at another institution) to obtain the bachelor's degree: Geol. 111, 112, 251, 252, 311, 312, 313, 410, 460, 470, 480, 492, 591a, b. Chem. 105, 106, 112; Math. 111, 112; and Physics 201, 202 or 211, 213 are

required of all geology majors. The combined physics and chemistry courses taken will be accepted by the Department of Geology as fulfilling the University requirement for a minor. In partially fulfilling the group requirements of the University, this department requires Anthropol. 101; Archaeol. 200; Bot. 105; Geog. 231; eight hours of language; and Zool. 105.

The Department of Geology offers training for the master's degree and the Doctor of Philosophy degree, with specialization in various fields of geology. The graduate student is urged to acquire a broad undergraduate foundation in geology and supporting fields before he concentrates on a chosen branch of geology in graduate school. Certain fundamental courses are required of all graduate students: Geol. 507, 512, 551 and 591A,B. Course offerings are sufficiently varied and complete so that students may select other courses according to their needs and inclinations in consultation with their advisers.

The graduate program of the Department of Geology offers instruction in five broad divisions of geology, with the following course offerings in each division: (1) economic geology—Geol. 507, 510, 512, 520, 530, 535, 540, 545, 551, 591A,B,C,D, 641, 646, 655, 661, 662, 678; (2) mineralogy and petrology—Geol. 507, 510, 512, 540, 545, 551, 591A,B,C,D, 653, 655, 661, 662, 671, and 672; (3) paleontology—Geol. 507, 510, 512, 551, 574, 575, 576, 577, 580, 581, 582, 591A,B,C,D, 670, 671, 672, 680, 682, and 685; (4) stratigraphy and sedimentation—Geol. 507, 510, 512, 551, 574, 575, 576, 577, 591A,B,C,D, 653, 670, 671, 672, and 678; (5) structural, field and dynamic geology—Geol. 507, 510, 511, 512, 530, 551, 591A,B,C,D, 610, 615, 670, 671 and 672.

Master's Degree. (For general requirements see the Graduate School catalog.) Requirements for a master's degree in geology include (1) at least sixteen hours of formal course work in the major field and at least ten hours of formal course work in one or two minor fields; (2) a written exploratory examination at the beginning of the graduate program; (3) a comprehensive oral examination on the graduate course work prior to his thesis defense; (4) a thesis embodying the results of research under a faculty member's supervision; and (5) a final oral examination on the research thesis.

Doctor of Philosophy Degree. (For general requirements see the Graduate School catalog.) Requirements for a Doctor of Philosophy degree in geology include (1) a minimum of thirty hours of formal course work in the major field and a minimum of fifteen hours of formal course work in each of two minor fields (the minors may be in a related field outside of the Department of Geology in which upper division and graduate courses will be acceptable); (2) one degree or one year of acceptable graduate study at another institution; (3) a comprehensive examination after sixty hours of graduate work and at least one academic year prior to graduation; (4) dissertation embodying the results of original research; and (5) defense of his dissertation before a formally appointed committee at the close of his final year of study.

Suggested Curriculum for a Geology Major

Freshman Year			Sophomore Year		
	F	S		F	S
Geol. 111	4		Geol. 112		4
Math. 111, 112	5	5	Geol. 251, 252	4	4
Eng. 111, 112	3	3	Chem. 111, 112	4	3
Anthropol. 101		3	Hist. 170		3
Bot. 105		3	Zool. 105	3	
Health 130	2		Archaeol. 200	3	
Phys. ed. ½	½		Phys. ed. ½	½	½
Relig. 121, 122	2	2	Relig.	2	2
Total Hours	16½	16½	Total Hours	16½	16½

Junior Year			Senior Year		
	F	S		F	S
Geol. 311	4		Geol. 470, 460	3	4
Geol. 312, 313	1	3	Geol. 480	4	
Geog. 231	3		Geol. 591a,b	1	1
Physics 201, 202			Lang.	4	4
(or 211, 213)	4	4	Upper division		
Geol. 492		1	humanities elective ..		2
Relig.	2	2	Relig.	2	2
Upper division			Upper division		
electives	2	6	electives	3	4
Total Hours	16	16	Total Hours	17	17

Summer School

Geol. 410 (summer field camp) 4 hours

The above course outline represents minimum requirements for the Bachelor of Science degree in geology. For those students who may wish to prepare themselves for graduate study in one of the more specialized sub-sciences of geology, the following courses are recommended as electives.

General Geologic preparatory courses

Geog. 312 (2 hrs.), Statistics 221 (2 hrs.)

Geophysics preparatory courses

Math. 213 (5 hrs.), Math 334 (3 hrs.)

Physics 211, 212, 213, 214 (4, 1, 4, 1 hrs.) (not Physics 201)

Chem. 223 (5 hrs.)

Physics 341, 342 (4, 4 hrs.)

Geochemistry preparatory courses

Math. 213 (5 hrs.), Math 334 (3 hrs.)

Physics 211, 212, 213, 214 (4, 1, 4, 1 hrs.) (not Physics 201)

Chem. 223 (5 hrs.) Chem. 321 (4 hrs.)

Chem. 461, 462 (3, 3 hrs.)

Mineralogy preparatory courses

Math 213 (5 hrs.), Math 334 (3 hrs.)

Physics 211, 212, 213, 214 (4, 1, 4, 1 hrs.) (not Physics 201)

Geol. 551 (5 hrs.)

Physics 315 (3 hrs.)

Paleontology preparatory courses

Zool. 212, 213 (4, 4 hrs.)

Zool. 376 (4 hrs.)

Statistics 221 (3 hrs.)

Geol. 580, 581 (4, 4 hrs.) instead of 480

Required Curriculum for Geological Engineering

Freshman Year			Sophomore Year		
	F	S		F	S
Geol. 111, 112	4	4	Geol. 251, 252	5	3
Eng. 111, 112	3	3	Bot. 105		3
Math. 111, 112	5	5	Chem. 111, 112	4	3
Health 130	2		Math. 213, 334	5	3
Phys. Ed.	$\frac{1}{2}$	$\frac{1}{2}$	Phys. Ed.	$\frac{1}{2}$	$\frac{1}{2}$
Relig. 121, 122	2	2	History 170		3
Zool. 105		3	Relig.	2	2
Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$

Junior Year			Senior Year		
	F	S		F	S
Chem. 223	5		Civ. Eng. 203, 301	2	3
Civ. Eng. 101, 102	2	2	Geol. 470, 460	3	4
Geol. 311	4		Geol. 480	4	
Geol. 312, 313	1	3	Geol. 591A,B	1	1
Geol. 492		1	Lang.	4	4
Geog. 231		3	Lit. (upper division)		2
Physics 211, 213	4	4	Social Sci.		2
Relig.	2	2	Relig.	2	2
Upper division electives		2	Total Hours	16	18
Total Hours	18	17			
			Fifth Year		
	F	S		F	S
Summer School			Civ. Eng. 211, 212	3	2
Geol. 410 (summer field camp)		4 hours	Chem. 321		4
			Geol. 507, 512	2	4
			Geol. 551	5	
			Geol. 591C,D	1	1
			Electives	6	6
			Total Hours	17	17

Twelve semester hours from the following list of electives are to be taken during the fifth year and will apply toward the B.E.S. degree in geological engineering: Geol. 520, 530, 535, 540, 545, 574; physical chemistry; differential equations; nuclear physics.

Courses

- 101. Introduction to Geology.** (2:2:0) F.S.Su. Home Study also. (G-PS m) Staff
A cultural nontechnical course dealing with physical geology. Designed for the nonscience student who desires a broad introduction to earth science and a greater appreciation of his surroundings. May be taken with or without Geol. 102. Annual two-day field trip through central and southern Utah is sponsored each spring for all Geol. 101, 102, and 103 students of the year.
- 102. Introduction to Geology Laboratory.** (1:0:2) F.S.Su. (G-PS m) Staff
Laboratory course (including a local field trip) in which common rock and ore-forming minerals, common rocks, and maps will be studied. For annual field trip, see Geol. 101.
- 103. Life of the Past.** (3:3:0) F.S.Su. Home study also. (G-PS m) Staff
A cultural nontechnical course in historical geology. Designed for the nonscience student who desires an understanding of life forms and general historical events of the geologic past. Annual field trip, see Geol. 101.
- 111. Physical Geology.** (4:3:2) F.S. (G-PS m) Hamblin
Minerals, rocks, and other earth materials together with their distribution in the earth and the processes that operate on them. Includes several Saturday field trips early in the semester. Cost: approximately \$10. Not recommended for students who have taken Geol. 101 and 102.
- 112. Historical Geology.** (4:3:2) F.S. (G-PS m) Prerequisite Geol. 111. Hintze
The history of the earth and the evolution of its inhabitants. Representative fossils are studied in the laboratory. Required field trips cost approximately \$25.
- 251. Mineralogy.** (5:3:4) F. (m) Prerequisite: Chem. 105; concurrent registration accepted. Phillips
Structural mineralogy and crystallography emphasizing rock-forming minerals.

- 252. Petrology.** (3:2:2) S. (m) Prerequisite: Geol. 251. Bullock
A detailed study of the rock-forming minerals, and a megascopic study and classification of important igneous, sedimentary, and metamorphic rocks.
- 306. Landforms and Their Origin.** (3:3:0) S. Home Study also. (Offered in 1964-65 and alternate years) (G-PS m) Prerequisite: Geol. 101 or Geol. 111. Bushman
The earth's landscape features and their origin, dealing with the sculpturing of mountains, hills, plains, and plateaus by erosive processes, and the landform features produced by earth movements and volcanism. Designed especially for nonmajors.
- 311. Structural Geology.** (4:3:2) F. Prerequisites: Geol. 252 and Math 111. Hintze
Structural and physiographic features of the earth's crust and forces and agents which have produced them.
- 312. Geological Literature and Scientific Report Writing.** (1:1:0) F. Prerequisite: successful completion of Junior English Proficiency Exam. Rigby
Introduction to indexes and various sources of geologic literature. Written exercises on format, style, and expression of various kinds of geologic reports.
- 313. Geologic Methods.** (3:2:2) S. Prerequisite: Geol. 311. Bissell
Practice training in methods of geologic field work and the use of field instruments; office practice in geologic illustration.
- 410. Summer Field Camp.** (4:0:40) Su. only; see summer catalog. Prerequisites: Geol. 313, 492. Staff
A five-week summer field camp in geologic mapping. A one-hour seminar is required during the second semester prior to field camp. Required of all geology and geological engineering majors.
- 460. Principles of Economic Geology.** (4:3:2) S. Prerequisite: Geology 252. Bullock
Occurrence, identification and classification of common ore minerals and occurrence and classification of nonmetallic mineral deposits.
- 470. Stratigraphy and Sedimentation.** (3:2:2) F. Prerequisite: Geology 252. Bushman
Analytical study of sediments and their origin and study of the principles of stratigraphy.
- 480. Introduction to Paleontology.** (4:3:2) F. Prerequisite: Geol. 112. Rigby
Systematic study of fossil remains of the animal kingdom, and introductory study of structure, distribution, and development of animals and plants in past ages.
- 492. Seminar for Summer Field Camp.** (1:1:0) S. Staff
Required of geology majors the Spring Semester immediately preceding their geology summer camp.
- 496. Readings in Geology (Honors Program).** (1-2:0:3-6) F.S. Staff
Directed reading of challenging books and articles dealing with fundamental geologic problems.
- 501. Rocks and Minerals.** (2:2:0) F.Su. (m) Prerequisite: Geol. 102. Bullock
Introductory study of fundamentals of rock and mineral classification and identification. Designed to acquaint the student with the earth's common raw materials, their occurrences, and uses. For nongeology majors.
- 502. Geology for Teachers.** (2:2:0) S.Su. Home Study also. (m) Prerequisite: Geol. 101 and 102, or Geol. 103, or Geol. 111. Bushman
Designed to acquaint the teacher with sources of information, projects, and illustrative materials useful in the classroom.

- 507. Founders and Concepts of Geology.** (2:2:0) F. Bushman
The historical development of geology and the men who contributed to it; the concepts and philosophy that make geology distinct from other sciences. Analysis of some of the more controversial problems in geology.
- 510. Conducted Field Trips.** (1-3:0:3-9) S.Su. Prerequisite: Geol. 101, 103, or 111. Staff
Visits to and explanations of a variety of geologic features spectacularly displayed in intermountain west. Credit varies with number and length of trips in which student participates, but in general 30 hours will be spent in the field for each credit hour. Preparation for and review of each trip will be conducted on campus. Maximum credit allowable is 3 hours.
- 511. Geomorphology.** (3:3:0) F. (Offered 1964-65 and alternate years) Bushman
The historical development of geomorphic concepts. The description of land forms and evaluation of the processes that formed them, and the application of this knowledge to paleogeography and economic geology.
- 512. Geology of North America.** (4:3:2) S. Rigby
A region-by-region study of the areal geology, physiography, and geologic development of Canada, the United States, and Mexico.
- 520. Petroleum Geology.** (4:4:0) S. (Offered 1964-65 and alternate years) Hansen
Origin, classification, physical properties, distribution, accumulation, and methods of exploration of petroleum.
- 530. Engineering Geology.** (3:3:0) S. (Offered 1965-66 and alternate years) Hansen
Geological principles and phenomena important to an understanding of engineering problems (especially civil engineering), and the relationships which exist between the science of geology and the practical aspects of engineering.
- 535. Ground Water.** (4:4:0) F. Hansen
Origin, classification, migration, distribution, and production of water found beneath the earth's surface.
- 540. Geophysics.** (3:3:0) F. (Offered 1964-65 and alternate years) Prerequisites: Math. 214, Physics 213. Brimhall
To familiarize the student with the scope of geophysics, to give insight into methods used by geophysicists, and to outline some of the most important discoveries of these researches.
- 545. Geochemistry.** (3:3:0) F. (Offered 1965-66 and alternate years) Prerequisites: Math. 213, Physics 213, Chem. 106. Brimhall
The kinds and abundances of elements in the earth, their distribution, and the redistribution in various geologic processes.
- 551. Optical Petrography.** (5:3:4) F. Prerequisites: Geol. 252, Physics 202 or 213. Phillips
The behavior of light in crystalline substances and its application to the microscopic identification of minerals as fragments and in thin-section. A consideration of the various schemes of rock classification and the petrographic description of rocks.
- 574. Principles of Stratigraphy.** (3:2:2) F. (Offered 1964-65 and alternate years) Prerequisite: Geol. 470. Bissell
Study and interpretation of stratified rocks; principles of their origin, distribution, and correlation.
- 575. Precambrian and Paleozoic Stratigraphy.** (3:3:0) F. (Offered 1964-65 and alternate years) Hintze
Synthesis of regional stratigraphic relation in North America.

576. **Mesozoic and Cenozoic Stratigraphy.** (3:3:0) S. (Offered 1964-65 and alternate years) Hamblin
The basins of deposition (throughout the U. S.) of Mesozoic and Cenozoic rocks and key fossils associated with them. Special emphasis on the distribution of these rocks in the state of Utah.
577. **Oceanography.** (3:3:0) F. Prerequisite: Geol. 470. (Offered in 1964-65 and alternate years) Hamblin
A study of physical processes operating within oceans. Particular emphasis on dynamics of currents, waves, and tides, and the resulting shoreline topography, sedimentary patterns, and sea floor features.
580. **Invertebrate Paleontology (Protozoans through Brachiopods).** (4:3:2) F. (Offered 1965-66 and alternate years) Rigby
Designed for the upper division and the graduate student who desires a broad background in paleozoology including morphology, paleoecology, evolution, and stratigraphic significance of invertebrates. Basic course for student planning to do graduate work in paleontology or stratigraphy.
581. **Invertebrate Paleontology (Mollusks through Hemichordates).** (4:3:2) S. (Offered 1965-66 and alternate years) Prerequisite: Geol. 580. Rigby
Continuation of Geol. 580.
582. **Biostratigraphy.** (3:2:2) F. (Offered 1964-65 and alternate years) Pre-requisite: Geol. 480 or 581. Rigby
Fossils in their stratigraphic setting and principles of paleontologic chronology.
- 591A,B,C,D. **Seminar.** (1:1:0 ea.) F.S. Hansen
Required of all graduate students, and required attendance of all seniors.
610. **Structural Geology.** (3:3:0) F. (Offered 1965-66 and alternate years) Hintze
Earth structures and their origin, emphasizing foreign examples.
615. **Photogeology.** (3:1:4) S. (Offered 1965-66 and alternate years) Hintze
Techniques useful to practicing geologists; using parallax bar and various instruments applicable to contact print photos.
641. **Geophysical Exploration.** (5:4:2) S. (Offered 1964-65 and alternate years) Brimhall
646. **Geochemical Techniques and Mineral Prospecting.** (3:2:2) S. (Offered 1965-66 and alternate years) Prerequisite: Geol. 545. Brimhall
A survey of the kinds of techniques employed in geochemical prospecting. About half the course is taken up with a field problem in geochemical prospecting.
653. **Determinative Mineralogy.** (4:2:4) S. Prerequisite: Geol. 551. Phillips
Instruction in universal stage, polished opaque section, powder x-ray diffraction, and other advanced methods of mineral identification.
655. **Igneous and Metamorphic Petrology.** (4:3:2) F. (Offered 1964-65 and alternate years) Bullock
A detailed study of igneous and metamorphic rocks; their origin, classification, and distribution.
661. **Ore Deposits.** (4:3:2) F. (Offered 1965-66 and alternate years) Prerequisite: Geol. 460. Bullock
A detailed study of the metallic ore deposits, their origin, occurrence, and distribution. Emphasis is placed on the western mining districts.
662. **Nonmetallic Deposits.** (3:3:0) S. (Offered 1965-66 and alternate years) Phillips
A detailed study of nonmetallic mineral deposits, their mode of occurrence, and their application in the modern industrial world.

670. **Sedimentation and Sedimentary Tectonics.** (3:2:2) S. (Offered in 1964-65 and alternate years) Bissell

Fundamental concepts in the science of sedimentology, and laboratory exercises illustrative of processes of sedimentation followed by review and discussions of tectonic environments which control sedimentation. Field trips are taken into areas illustrative of the subject matter.

671. **Sedimentary Petrology—Carbonate Rocks.** (3:3:2) F. (Offered in 1965-66 and alternate years) Bissell

Field and laboratory classifications and studies of carbonate sedimentary rocks.

672. **Sedimentary Petrology—Clastic Rocks.** (3:2:2) S. (Offered in 1965-66 and alternate years) Prerequisite: Geol. 470. Hamblin

Field and laboratory study and classification of clastic rocks, particularly sandstones.

678. **Subsurface Methods.** (3:2:2) S. (Offered 1965-66 and alternate years) Prerequisite: Geol. 551. Bushman

To acquaint the student with the tools and techniques employed by the sub-surface geologist in describing the lithologic characteristics of sub-surface rock; the use of this information for interpreting sedimentation environments, geologic structures, and stratigraphic correlation.

680. **Micropaleontology.** (3:2:2) F. (Offered 1965-66 and alternate years) Prerequisite: Geol. 480 or 581. Rigby

A systematic study of the geologically important microfossils, including techniques, morphology, and stratigraphic significance. Conodonts, ostracodes, and foraminifera are stressed.

682. **Vertebrate Paleontology.** (3:3:0) S. (Offered 1964-65 and alternate years) Prerequisite: Geol. 480 or 581, or consent of instructor. Staff

The backboneed animals through time (Agnatha through Mammalia). Morphology, ecology, phylogeny, and stratigraphic significance are stressed.

685. **Paleoecology.** (4:3:2) S. (Offered 1965-66 and alternate years) Prerequisite: Geol. 480 or 581. Rigby

Interpretation of ancient environments and of the adaptation of organisms to these environments as shown by a systematic treatment of each of the major taxonomic groups and by selected analyses from the professional geologic literature.

696. **Reading and Conference in Geology.** (1-4:1-4:0) F.S.Su. Staff

697. **Directed Field Studies.** (Arr.) F.S.Su. Staff

Supervised field work in any of the fields of specialization in geology for candidates for master's degree.

698. **Research.** (1-4:1-4:0) F.S.Su. Staff

699. **Thesis for Master's Degree.** (1-4:1-4:0) F.S.Su. (m) Staff

797. **Directed Field Studies.** (Arr.) F.S.Su. Staff

Supervised field work in any of the fields of specialization in geology for candidates for Ph.D. degrees.

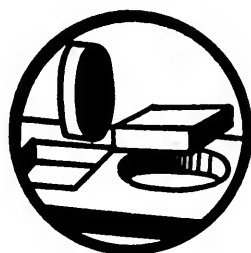
799. **Dissertation for Doctor of Philosophy Degree.** (Arr.) F.S.Su. Staff

Graduate Department of Education

Professors: Egbert (chairman, 205 McKay),
Alley, Bauer, Burrup, Callahan,
Christensen, Clarke, Downing,
Lloyd, Moffitt, Morrill, Oakes, Reid,
Romney, Woolf.

Associate Professors: Babcock, Barnett, Crnkovic, Daines,
Harris, Jensen, Ovard, Parker,
Read.

Assistant Professors: Belt, Hardy, Harms, Moses, Wilcox.



The Graduate Department of Education is organized to offer courses for all persons engaged in professional education and service courses to graduate students in other disciplines.

Programs are designed to give special training to school administrators, school business managers, supervisors, curriculum directors, educational psychologists, school psychologists, specialists in counseling and guidance, teachers of special education, master teachers, and other specialists. Such programs are at once intensive and broad in scope. They are designed to give the depth and breadth needed by specialists in education.

Graduate Degrees. The department offers graduate degrees at both the master's and doctoral levels. The Master of Arts and the Master of Education degrees are offered. In addition, both the Doctor of Education and the Doctor of Philosophy are offered by this department. (For details of these programs see the graduate bulletin.)

A two-year certificate, specialist in educational administration, is planned for school superintendents, assistant superintendents, and elementary and secondary school principals.

Courses

514, 515. Analysis of In-Service Problems. (1-3:1-3:1 ea.) F.S.Su. Staff

534. Experimental Practices in Teaching. (3:3:1) F.Su. Ord, Berryessa

Current concepts in elementary education with observation and analysis of some of the best teaching practices. Designed to meet the needs of persons seeking a refresher course, and for prospective administrative personnel in the elementary schools.

547. The Place and Development of Skills in Various Approaches to Reading. (3:3:0) F.Su. Daines

Detailed consideration of the reading skills developed in kindergarten through grade twelve with emphasis on word analysis; the development of these skills in the various approaches to reading.

548. Directed Observation in the Elementary School. (2:0:4) F.S. Staff

Directed observation with elementary school pupils. Required for speech therapists who do not have elementary certificates; recommended for teachers who are recertifying and those working in the Continuous Progress Plan.

549. Directed Observation in the Secondary School. (2:0:4) F.S. Staff

Directed observation with secondary school pupils. Required for speech therapists who do not have secondary certificates; recommended for teachers who are recertifying and those working in the Continuous Progress Plan.

- 550. Introduction to Guidance Services.** (2:2:0) F.S.Su. Reid
Principles and practices of pupil personnel services in the public schools. Designed for prospective teachers of both elementary and secondary levels. Required but may not be counted as part of the 30 hours for the master's degree by students majoring in this area of specialization.
- 551. Evaluation of Educational and Psychological Literature.** (2:2:0) S.Su. Staff
A consideration of the nature of various kinds of educational publications and of problems involved in interpreting their contents. Not intended for students seeking graduate degrees.
- 552. Statistical Methods.** (2:2:0) F.Su. Wilcox, Egbert
Measures of central tendency, variability, and linear correlation. Elementary concepts of probability and inference are also discussed. Required but may not be counted as part of the 30 hours for the master's degree by students majoring in this department.
- 554. Advanced Statistics.** (2:2:0) S.Su. Prerequisite: Grad. Ed. 552. Egbert, Wilcox
Educational applications of analysis of variance; analysis of covariance; multiple and partial correlation; nonparametric methods.
- 553. Educational Tests and Measurements.** (3:3:0) S.Su. Harris
Principles of standardized testing in the schools. Construction and use of classroom tests. Consideration also given to evaluation techniques other than testing.
- 563. Problems in the Education of the Visually Handicapped.** (3:3:0) Arr. Pre-requisite: consent of instructor. Staff
Problems confronting administrator and teacher in the different types of school programs now available for the visually handicapped.
- 564. Methods and Materials for Teaching Children With Cerebral Palsy.** (2:2:0) S.Su. Wilson
Study of specialized methods and materials for teaching children with cerebral palsy and related neurological impairment.
- 566. Problems in the Education of Orthopedically Handicapped Children.** (3:3:0) F.S.Su. Prerequisite: Grad. Ed. 560. Wilson
Problems of identification, diagnosis and placement, organization of educational programs, curriculum development, and teaching methods for students with orthopedic handicaps including the homebound and hospitalized.
- 567. Problems in the Education of Mentally Retarded Children.** (3:3:0) F.S.Su. Prerequisites: Grad. Ed. 460, 461. Wilson
Problems of identification, diagnosis and placement, organization of educational programs, curriculum development and teaching methods for classes for mentally retarded students.
- 568. Observation and Participation in Special Education.** (2:1:3) F.S.Su. Pre-requisite: consent of instructor. Staff
A. Mentally Retarded; B. Orthopedically Handicapped; C. Remedial Reading; D. Visually Handicapped.
- 569. Practicum in Special Education.** (2-4:0:5-10) Arr. Prerequisite: consent of instructor. Staff
A. Mentally Retarded; B. Orthopedically Handicapped; C. Remedial Reading; D. Visually Handicapped.
- 571. Student Teaching with Deaf Students.** (8:0:40) Arr. Prerequisite: consent of instructor. Staff
Practice teaching experience with deaf students in residential or day school classes.
- 573. Workshop for Teachers of Bilingual Children.** (2:Arr.:Arr.) Su. Staff
Study of educational needs, materials, and methods appropriate to the background and language problems of bilingual students.

601. **Comparative Current Educational Philosophy.** (3:3:0) F.S.Su. (m) Alley
603. **Educational Classics and Contemporary Issues.** (3:3:0) S. (m) Lloyd, Dixon
606. **History of Education in Europe and America.** (4:4:0) F.Su. (m) Hardy
607. **Education in a World Setting.** (2:2:0) S. Lloyd, Romney
608. **Social Foundations of Education.** (3:3:0) S.Su. (m) Ovard
610. **Development of Instructional Materials (Audio-Visual Aids).** (2:2:1) F.Su. Staff
 Prerequisite: Tchr. Ed. 406 or equivalent.
 An advanced course designed to follow Tchr. Ed. 406.
 Principles of learning and the unique contributions of newer instructional media. Of primary concern is the selection, integration, and administration of instructional equipment and materials. Construction and use of specialized materials.
612. **Supervision of Student Teachers.** (2:2:0) S.Su. Wilcox
 For those desiring a well-rounded view of the student-teaching program.
613. **Teaching Speech in Secondary Schools.** (2:2:0) Su. Staff
616. **Analysis of In-service Problems.** (1-3:1-3:1) F.S.Su. Staff
619. **Directing Out-of-Class Activities in Secondary Schools.** (2:2:0) F.Su. Callahan, Flandro
 Examination of successful practices in scheduling and directing out-of-class activities. The effect of current scientific curriculum emphasis on out-of-class activities is explored.
622. **Advanced Study in Childhood Education.** (2:2:0) F.Su. Daines
 Educational theory and analysis of current practices in schools as they are related to the significance and problems of early childhood education.
623. **Science in the Elementary School.** (2:2:0) S.Su. Berryessa, Babcock
 Designed to give experienced teachers insight into the teaching of elementary science. Includes concentration in unit instruction and methods of presenting science concepts to children.
624. **Advanced Arts and Crafts for Elementary Teachers.** (2:2:1) F.Su. Prerequisite: consent of instructor. Staff
 Exploring ideas and materials for the instruction of elementary school children. Attention is given to the specific needs of each course member.
625. **Social Studies in the Elementary School.** (2:2:0) S.Su. Ord, Berryessa
 The scope and sequence of the social studies program, its objectives in developing democratic citizenship, and the methods employed in accomplishing this aim.
626. **Methods in the Elementary School—Traditional and Newer Media.** (3:3:0) S.Su. Ord
 Not open to students who have taken Grad. Ed. 639.
 Assessment of readiness; problems of organizing pupils and faculty for instruction, guiding and pacing, and evaluation.
627. **Teaching Reading in Secondary Schools.** (2:2:0) F.Su. Staff
 Methods of teaching reading in the secondary school and their adaptation. Role of the subject-matter specialist in the reading program.
629. **Secondary School Curriculum Workshop.** (2:2:0) Su. Flandro, Callahan
 Designed for an analysis of in-service curriculum problems.
 Not open to students who have taken Grad. Ed. 656.
630. **Teaching Mathematics and Science in Secondary Schools.** (2:2:0) Su. Baird
 Designed especially for in-service teachers. Emphasis given to the newer methods, materials, and trends in science and mathematics instruction. Lesson plans developed.

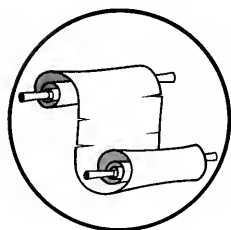
- 631. Curriculum Development in the Elementary School.** (3:3:0) F.Su. Daines, Ord
Not open to students who have taken Grad. Ed. 656.
Principles and procedures for organizing the instructional program; patterns of curriculum organization; and techniques for change, evaluation, and stabilization of curriculum.
- 632. Reading in the Elementary School.** (2:2:0) F.Su. Daines
An overview of the reading program; comparison of different approaches to the teaching of reading; and word recognition skills studied in greater detail. Opportunities are provided for students to work on their own problems in teaching reading.
- 633. Language Arts in the Elementary School.** (2:2:0) F.Su. Daines
Best practices in modern methods of instruction in listening, speaking, and writing with their related skills.
- 634. Arithmetic in the Elementary School.** (2:2:0) F.S.Su. Baird, Babcock
Concepts in arithmetic and various activities which will help students acquire correct arithmetical concepts. Special attention on the contributions of research in teaching arithmetic.
- 635. Teaching Social Studies in Secondary Schools.** (2:2:0) S.Su. Flandro
Designed to broaden the understanding of curriculum and instruction in secondary school social studies. Relates methods and techniques to the objectives of the social studies.
- 636. Curriculum Development in the Secondary School.** (3:3:0) S.Su. Callahan, Crnkovic, Belt, Flandro
Not open to students who have taken Grad. Ed. 631.
Analysis of secondary curriculum development in terms of psychological and philosophical principles. Curriculum issues, trends, and current practices are examined.
- 639. Methods in the Secondary School—Traditional and Newer Media.** (3:3:0) F.Su. Wilcox, Belt, Callahan, Crnkovic
Not open to students who have taken Grad. Ed. 626.
Problems of organizing pupils and faculty for instruction; analysis of methods; patterns of grouping; programmed learning; team teaching.
- 640. Curriculum of the Junior College.** (3:3:0) F.S.Su. Smith, Christensen
Analysis of junior and community college curriculum practices throughout the United States. Relationship of philosophy to curriculum emphasis. Examination of issues, trends, and current practices.
- 642. Methods of Higher Education Instruction.** (3:3:1) F.S.Su. Christensen, Smith
Identification of teacher and pupil activities required for conceptual learning at the college level. Insight into the backgrounds, abilities, interests and goals of college students and what these mean for instruction. Familiarity with newer tools, teaching materials, and instructional practices.
- 644. Directed Teaching in Higher Education.** (2-4:1-2:5-10) F.S.Su. Prerequisite: Grad. Ed. 642. Smith, Christensen
Designed to help students become accomplished and skilled teachers of college classes and to prepare for and complete the steps necessary to be placed into a college position.
- 645. Guidance Testing and Diagnosis.** (3:3:0) F.S.Su. Prerequisite: Grad. Ed. 552. Jensen, Harris
Study of advantages and disadvantages of particular types of tests; practice in interpreting test results; and the implications of test choices and usage.
- 646. Counseling Theory and Practice.** (3:3:0) F.S.Su. Prerequisites or concurrent: Grad. Ed. 645, Psych. 450 or 550. Downing, Parker
Includes an intensive study of the various theories of counseling, important concepts and views of counseling authorities, current research, and accepted practices.

- 647. Group Techniques for Counselors.** (2:2:0) S.Su. Prerequisite: Grad. Ed. 646.
Downing, Moses
Principles of group guidance and their application.
- 648. Industrial Counseling.** (2:2:0) Arr. Prerequisites: Grad. Ed. 646, 651. Staff
- 650. Guidance Workshop.** (2:2:0) Arr. Prerequisite: Grad. Ed. 550. Staff
- 651. Informational Services in Guidance.** (3:3:0) F.S.Su. Prerequisite: Grad. Ed. 550. Downing
Consideration of various aspects of vocation selection including sources of information, use of community resources, counseling procedures, and the filing and use of occupational data. Theories and psychological factors of career selection emphasized.
- 652. Administration of Guidance Services.** (2:2:0) Prerequisite: Grad. Ed. 550. Downing
Major consideration given to the procedures of organizing and administering guidance programs, and methods of dealing with the problems related to these activities.
- 653. Student Personnel Services in Higher Education.** (2:2:0) S. Prerequisite: Grad. Ed. 550. Smith
- 656. Advanced Educational Psychology.** (3:3:1) F.S.Su. Prerequisite: Grad. Ed. 403. Downing, Bauer
Principles of effective human learning. Discussion of major learning theories and their significance for classroom procedures and for general educational theory.
- 657. Behavior Problems in the Schools.** (2:2:0) F.S.Su. Prerequisite: Grad. Ed. 460 or 550. Bauer, Downing
Study of mental hygiene principles and their application to typical classroom problems.
- 658. Educational Tests and Measurements.** (2:2:0) F.Su. Prerequisite: Education 540. Bauer, Harris, Moses
- 659. Educational and Psychological Principles of Programmed Learning.** (3:3:0) Prerequisite: Psych. 560 or Grad. Ed. 656. Bauer
Principles involved in the development of programs, and a consideration of values and cautions in the utilization of various programs.
- 660. Educational Research and Thesis Writing.** (2:2:0) F.S.Su. Prerequisite: Grad. Ed. 552. Egbert
The nature of science and the scientific method; methods of educational research; preparation of the research proposal; preparation of the research report.
- 662. Workshop: Curriculum and Methods for the Mentally Retarded.** (2:8 hrs. daily for 2 weeks) Su. Staff
Study of curriculum and methods; the development of materials and teaching aids for the mentally retarded.
- 663. Workshop: Curriculum and Methods for the Visually Handicapped.** (2:8 hrs. daily for 2 weeks) Su. Staff
Study of curriculum and methods; the development of materials and teaching aids for the visually handicapped.
- 664. Workshop: Curriculum and Methods for the Gifted.** (2:8 hrs. daily for 2 weeks) Su. Staff
Study of curriculum and methods; development of materials and teaching aids for the gifted.

665. **Diagnostic and Therapeutic Services for the Orthopedically Handicapped.** (2:2:0) Su. Staff
Study of community resources and procedures for the diagnosis of children with orthopedic handicaps and the ancillary therapy and treatment services provided for these children.
666. **Special Education Services in Public Schools.** (2:2:0) Su. Staff
Problems of organization, administration and supervision of special education services in the public schools.
667. **Diagnosis of Achievement Difficulties.** (2:2:0) F.S.Su. Prerequisite: Grad. Ed. 560 or 645. Staff
Survey and use of diagnostic techniques in identification and evaluation of learning difficulties. Bauer, Harris
668. **Remedial Teaching Techniques.** (2:2:0) F.S.Su. Prerequisite: Grad. Ed. 667 or consent of instructor. Staff
Remedial procedures applicable to basic subjects with major emphasis in reading. Bauer
669. **Guidance and Counseling for the Handicapped.** (2:2:0) Arr. Su. Prerequisite: Grad. Ed. 460. Staff
Principles and techniques of guidance services for the physically, mentally or socially handicapped with study of effective counseling techniques.
671. **Practicum in Testing and Counseling.** (5:2:10) F.S.Su. Prerequisite: consent of instructor. Staff
Downing, Parker
673. **Practicum in Remedial Teaching.** (2-4:1-2:4-8) F.S.Su. Prerequisite: consent of instructor. Staff
Supervised experience in working with academically retarded children; including individualized program planning and remedial teaching techniques and evaluation.
675. **Organization and Administration of Public Schools.** (3:3:0) F.S.Su. (m) Morrill
677. **Public School Finance.** (2:2:0) F.S.Su. (m) Burrup
678. **The Elementary School Principalship.** (3:3:0) F.S.Su. (m) Harms
679. **The Secondary School Principalship.** (3:3:0) F.S.Su. (m) Burrup
680. **Field Work in Educational Administration.** (3:1:4) F.S.Su. (m) Harms
682. **Personnel Problems of the School Staff.** (2:2:0) S.Su. (m) Barnett, Harms
685. **Supervision of Education.** (3:3:0) F.S.Su. (m) Harms, Moffitt
687. **School Law.** (2:2:0) F.S.Su. (m) Burrup, Barnett
696. **Seminar.** (2:2:0) F.Su. (m) Staff
A. Counseling; B. Curriculum and Instruction; C. Special Education.
691. **Seminar.** (2:2:0) S.Su. (m) Staff
A. Educational Psychology; B. Curriculum and Instruction; C. Special Education.
- 693, 694. **Independent Readings.** (1-2:3-6:0 ea.) F.S.Su. (m) Staff
- 696, 697. **Independent Research.** (1-2:3-6:0 ea.) F.S.Su. (m) Staff
698. **Field Project.** (2-4:Arr.:Arr.) F.S.Su. Staff
699. **Thesis for Master's Degree.** (2-4:Arr.:Arr.) F.S.Su. Staff
706. **Objectives and Programs of Continuing Education.** (2:2:0) Su. Alley
709. **Philosophy of Program Planning.** (2:2:0) S. Alley

731. **System Analysis and Design in Education.** (2:2:0) F. Su. Egbert
Introduction to the systems approach; application of the systems approach to education; analysis and design of education system; implication of new technology and methodology to educational systems design.
740. **Advanced Counseling Theory.** (2:2:0) S.Su. Prerequisites: Grad. Ed. 646, Psych. 550. Parker
- 741. **Practicum in Counseling.** (3:1:8) S. Prerequisite: consent of instructor. Parker
- 745. **Internship in School Psychology.** (2-4:1-2:4-8) Prerequisite: consent of instructor.
Supervised practice in testing, diagnosis, and case work with children in the public schools. Variety of community experiences related to school psychology work.
- 760. **Problems of Elementary School Administration.** (2:2:0) S.Su. (m) Harms
762. **The Junior High School.** (2:2:0) S.Su. (m) Ovard, Clarke
763. **The Senior High School.** (2:2:0) F.Su. (m) Ovard, Clarke
765. **Business Administration of the Public Schools.** (3:3:0) Su. (m) Burrup
Develops understanding and facility in the business office responsibilities of local school districts.
- 767. **Research and Survey Procedures in Educational Administration.** (2:2:0) S.Su. (m) Oakes
768. **Leadership Functions in Educational Administration.** (3:3:0) F.S.Su. (m) Morrill
769. **School-Community Relations.** (2:2:0) F.Su. Morrill
770. **Organization and Administration of Continuing Education.** (2:2:0) S.Su. (m) Ovard
771. **College and University Organization and Administration.** (2:2:0) F.Su. (m) Smith
773. **Public School Building Programs.** (3:3:0) S.Su. (m) Morrill
775. **Educational Administrative Theory.** (3:3:0) F.S.Su. (m) Morrill, Oakes
- 780. **Internship in Educational Administration.** (2-6:0:6-18) F.S. Burrup, Morrill
- 790. **Seminar.** (2:2:0) F.Su. Prerequisite: consent of instructor. Staff
A. Educational Administration; B. Educational Measurement.
- 791. **Seminar.** (2:2:0) S.Su. Prerequisite: consent of instructor. Staff
A. Educational Administration; B. Learning Theory Applied to Education.
- 798. **Field Project for Ed.D. Degree.** (Arr.) F.S.Su. Staff
- 799. **Dissertation for Ph.D. Degree.** (Arr.) F.S.Su. Staff

Graduate Studies in Religious Instruction



Professors: Riddle (chairman, 218 JS), R. L. Anderson, Andrus, Belnap, Clark, Done, Ludlow, Nibley, Rich, Sperry, Yarn.

Associate Professors: Backman, Barron, Doxey, Horsley, Larson, Pearson, Turner.

Assistant Professors: Anderson, L. C. Berrett, Cowan.

Instructor: Cook.

The Department of Graduate Studies in Religious Instruction has three programs in which master's and doctor's degrees may be obtained. These programs are Bible and Modern Scripture, History of Religion, and Religious Education. The requirements for each of these degrees are to be found in the Graduate School Bulletin.

Courses

(Note: Courses where the semester is not designated are specialized offerings given on demand).

- 501. **Analysis of the Old Testament: The Pentateuch and Historical Books.** (3:3:0) F.Su. Sperry
- 502. **Analysis of the Old Testament: Prophetic Books.** (2:2:0) S.Su. Sperry
- 503. **Analysis of the Old Testament: Poetic and Wisdom Literature.** (2:2:0) S.Su. Sperry
- 510. **The Gospels.** (2:2:0) F.Su. R. L. Anderson, Sperry, Turner
- 511. **Paul's Life and Letters.** (2:2:0) F.Su. R. L. Anderson, Sperry, Turner
- 512. **The General Epistles and the Apocalypse.** (2:2:0) S.Su. R. L. Anderson, Sperry, Turner
- 513. **New Testament Times.** (2:2:0) S.Su. R. L. Anderson
- 527. **History and Doctrines of the Pearl of Great Price.** (3:3:0) F.Su. Andrus, Clark
- 530. **L.D.S. Theology.** (2:2:0) F.Su. Riddle, Turner
- 541. **Documents of L.D.S. Church History (1820-1839).** (3:3:0) F.Su. Andrus, Backman, Clark, Larson, Rich
- 542. **Documents of L.D.S. Church History (1839-1850).** (3:3:0) S.Su. Andrus, Backman, Clark, Larson, Rich
- 543. **Documents of L.D.S. Church History (1850-1900).** (3:3:0) F.Su. Allen, Larson
- 544. **Documents of L.D.S. Church History (1900 to present).** (3:3:0) Arr. Cowan
- 545. **Great Figures of L.D.S. Church History.** (2:2:0) Arr. Staff
Biographical study of significant L.D.S. Church personalities of the first half century of the restoration.
- 546. **Social, Economic, and Political Thought of Joseph Smith.** (2:2:0) Arr. Andrus
- 551. **The Primitive Church.** (2:2:0) F. Nibley

552. **Christianity in the Second and Third Centuries.** (2:2:0) S. Nibley
553. **Great Figures in Christian History.** (2:2:0) Arr. Horsley
Biographical study of significant Christian personalities and their contribution to Christianity from Paul to Joseph Smith.
554. **Martin Luther, Forerunner of the Restoration.** (2:2:0). Arr. Horsley
Luther's life, theology and influence upon Protestant Christianity, with special emphasis upon the significance of Luther for Mormonism.
555. **Comparative World Religions.** (2:2:0) Arr. Palmer
Hinduism, Jainism, Sikhism, Buddhism.
556. **Comparative World Religions.** (2:2:0) Arr. Palmer
Taoism, Confucianism, Shintoism, Judaism, Zoroastrianism, and Islam.
557. **Religions of the Ancient Near East.** (2:2:0) F. Nibley
558. **Christian Rites and Liturgy.** (2:2:0) Arr. Nibley
559. **History of Christianity in Asia.** (2:2:0) F. Palmer
- 570, 571. **Methods of Teaching Religion in Secondary Schools.** (2:5:0 ea.) Su. W. E. Berrett
- 593, 594. **Hebrew Grammar and Selected Readings.** (3:3:0 ea.) F.S. Sperry
601. **History of the Hebrews.** (3:3:0) F. Sperry
604. **The Literature of the Old Testament.** (2:2:0) S. Sperry
605. **Canon and Text of the Old Testament.** (2:2:0) F. Sperry
606. **The Apocrypha and Pseudepigrapha.** (2:2:0) S. Sperry
607. **Religion of the Old Testament.** (2:2:0) F. Nibley
608. **Cultural and Religious Patterns of the Ancient Near East.** (2:2:0) S. Sperry
610. **Early Christian Literature.** (2:2:0) F. R. L. Anderson
611. **Formation of the New Testament: Text and Canon.** (2:2:0) Arr. Sperry
612. **Textual Criticism of the New Testament.** (2:2:0) Arr. R. L. Anderson
621. **Analysis of the Book of Mormon. (Doctrinal)** (3:3:0) F.Su. Ludlow, Sperry
622. **Analysis of the Book of Mormon. (External Evidence)** (3:3:0) S.Su. Ludlow, Sperry
624. **Analysis of the Doctrine and Covenants.** (3:3:0) F.Su. Andrus, Doxey
625. **Analysis of the Doctrine and Covenants.** (3:3:0) S.Su. Andrus, Doxey
- 627. **Seminar: Pearl of Great Price.** (2:2:0) S. Andrus, Doxey
- 641. **Special Problems in L.D.S. Church History.** (3:3:0) Arr. Andrus, Backman, Larson, Rich
645. **Historical Development of L.D.S. Doctrine and Practices.** (3:3:0) Arr. Andrus, Backman, Larson, Rich
653. **History of the Papacy.** (2:2:0) F. Horsley
654. **Reformation and Counter-Reformation.** (2:2:0) S. Horsley
658. **Comparative Studies in American Religions.** (3:3:0) F.S. Backman
659. **American Religious Thought.** (2:2:0) Arr. Staff
- 660. **Seminar in History of Asian Religion.** (2:2:0) S. Palmer

670. Survey of Religious Education. (2:2:0) S. Belnap
671. Curriculum of Religion in Secondary Schools. (2:5:0) Su. W.E. Berrett
672. Religious Curriculum Building for Secondary Schools. (2:5:0) Su. Prerequisite: Relig. 671. W. E. Berrett
- 673, 674. Methods of Teaching Religion in College. (2:5:0 ea.) Su. W. E. Berrett
675. Curriculum of Religion in College. (2:5:0) Su. W. E. Berrett
676. Religious Curriculum Building for Colleges. (2:5:0) Su. Prerequisite: Relig. 675. W. E. Berrett
677. Problems of Teaching Religion. (1:3:0) Arr. W. E. Berrett
680. Philosophic Problems and Religious Instruction. (1:3:0) Su. Riddle, Yarn
690. Studies in the Hebrew Old Testament. (3:3:0) Arr. Prerequisite: Two years of Hebrew or consent of instructor. Sperry
691. Studies in Hebrew. (3:3:0) Arr. Prerequisite: Relig. 690. Sperry
- 693, 694. Biblical Aramaic and the Targums. (2:2:0 ea.) Arr. Prerequisite: at least one year of Biblical Hebrew. Sperry
699. Thesis for Master's Degree. (1-6:Arr.Arr.) Arr. Staff
709. Seminar: Old Testament. (2:2:0) Arr. Sperry
710. Seminar: New Testament. (2:2:0) Arr. R. L. Anderson
711. Readings in Greek: The Gospel and Acts. (3:3:0) Arr. Prerequisite: one year of Greek or consent of the instructor. R. L. Anderson, Nibley
712. Readings in Greek: Paul's Letters. (3:3:0) Arr. Prerequisite: one year of Greek or consent of the instructor. R. L. Anderson, Nibley
713. Readings in Greek: General Epistles and the Apocalypse. (3:3:0) Arr. Prerequisite: one year of Greek or consent of the instructor. R. L. Anderson, Nibley
721. Seminar: Book of Mormon. (2:2:0) Arr. Ludlow, Sperry
724. Seminar: Doctrine and Covenants. (2:2:0) Arr. Andrus, Doxey
728. Readings in Modern Scripture. (1-2:Arr.:Arr.) Arr. Andrus
748. Readings in L.D.S. Church History. (1-2:1-2:0) Arr. Andrus, Backman, Larson, Rich
755. Seminar: History of Religion. (2:2:0) F.S.Su. Arr. Andrus, Horsley, Larson, Palmer, Rich
758. Readings in Christian History. (1-2:1-2:0) Arr. Nibley
759. Readings in the History of World Religions. (1-2:1-2:0) Arr. Nibley
791. Syriac. (5:5:0) Arr. Prerequisite: two years Biblical Hebrew or one year Aramaic. Sperry
792. Syriac. (3:3:0) Arr. Prerequisite: Relig. 791. Sperry
- 793, 794. Akkadian. (2:2:0 ea.) Arr. Prerequisite: two years Biblical Hebrew. Sperry
- 797, 798. Ugaritic. (3:3:0 ea.) Arr. Prerequisite: two years Biblical Hebrew. Staff
- The alphabet, vocabulary, and grammar of the language of the Ras Shamra tablets. Valuable for its parallels to Biblical Hebrew.
799. Doctoral Dissertation. (1-6:Arr.:Arr.) Arr. Staff

Health and Safety Education

Professors: Watters (chairman, 220 SFH),
Hart, Hartvigsen, Nicholes.

Assistant Professors: Duerden, Robison, Shaw, Tuckett.

Instructors: Hardy, Kimball, Rhodes, Rollins,
Salazar.

Special Instructor: James.



Health Education Major. Students majoring in health education will take the following courses: Health 121, 325, 381, 521, 560; 530 or 552; also the following courses from other departments or their equivalent: Food & Nutr. 115; Zool. 261, 262 or 263; Psych. 340; Bact. 311; and at least 5 hours from other health courses or elective courses which also count in health education: Health 530, 552, 561, 501; Bact. 121, 331; Chem. 101; Psych. 185, 445, 540; and Speech 545. The student's program is to be established through consultation with an adviser from the department.

Health Education Minor. Students may minor in health education by completing the following courses: Health 121, 381, 521; and at least 10 hours selected from the following: Food & Nutr. 115; Bact. 311, 331; Psych. 340; Health 325, 530, 552, 560, 561. The student's program is to be established through consultation with an adviser from the department.

Driver and Safety Education Minor. Students may minor in driver and safety education and qualify for state certification by completing the following: Health 121, 325, 444, 445, and six hours selected from the following courses: Health 530, 521, 560; Tchr. Ed. 406; Psych. 321, 330; Sociol. 357; and Indus. Ed. 189. The student's program is to be established through consultation with an adviser from the Health and Safety Education Department.

Composite Major. See courses required for teaching majors, minors, and composite majors listed under the College of Education.

Suggested Course Outline

First Year			Second Year		
	F	S		F	S
Eng. 111, 112	3	3	Sociol. 111	3	
Relig.	2	2	Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Health 130	2		Zool. 261		3
Hist. 170	3		Zool. 262		2
Chem. 101		5	Health 121	2	
Bact. 121	3		Food & Nutr. 115	2	
Zool. 105		3	Bact. 311		2
Psych. 111		3	Physics 100	3	
Eng. 250	3		Humanities	3	
			Tchr. Ed. 200		NC
			H.D.F.R. 210		3
			Minor	2	4
Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$

Third Year			Fourth Year		
	F	S		F	S
Health 381		2	Tchr. Ed. 310	2	
Psych. 340	2		Tchr. Ed. 415	2	
Bot. 376		3	Relig.	2	2
Rec. 337	2		Tchr. Ed. 479	8	
Relig.	2	2	Health 362	2	
Tchr. Ed. 301	2		Health 552		2
Phys. Ed. 377		3	Tchr. Ed. 403		4
Tchr. Ed. 406		2	Health 325		2
Health 521		2	Health 561		3
Health 560	2		Minor		4
Health 530	2				
Minor	4				
		2			
Total Hours	16	16	Total Hours	16	17

Courses

- 10. Beginning Drivers' Laboratory.** (0:0:2) S.Su. James
 Noncredit course. Driver education for beginning drivers. Used as a laboratory in conjunction with Health 445. No driving experience required. Fee \$10.00.
- ☐ **Chemistry 101. Introductory Inorganic Chemistry.** (5-4:5:4-2)
 or
☐ **Chemistry 105. General College Chemistry.** (4:4:2)
 or
☐ **Chemistry 111. Principles of Chemistry.** (4:5:0)
☐ **Food and Nutrition 115. Essentials of Nutrition.** (2:2:0)
- 121. First Aid.** (2:2:0) F.S.Su. (m) Staff
 Principles and practices in emergency care and first aid procedures for injuries. American Red Cross certificate given upon successful completion of course.
- ☐ **Bacteriology 121. General Bacteriology.** (3:2:3)
- 130. Personal Health.** (2:2:0) F.S.Su. Home Study also. Staff
 Intended to develop adequate knowledge of health and illness and desirable health attitudes and practices. University health requirement. Required of all freshman students. May be taken either semester during freshman year.
- ☐ **Psychology 185. Physiological Psychology.** (3:3:0)
☐ **Zoology 261. Elementary Human Physiology.** (3:3:0)
☐ **Zoology 262. Anatomy and Physiology Laboratory.** (2:0:4)
☐ **Bacteriology 311. Sanitation and Public Health.** (2:2:0)
- 325. Safety Education.** (2:2:0) F.S.Su. Home Study also. (m) James, Watters
 Comprehensive course covering all major areas of general safety including school, playground, home, farm, industrial, and traffic safety.
- ☐ **Bacteriology 331. Microbiology.** (5:3:6)
☐ **Psychology 340. Mental Hygiene.** (2:2:0)
- 361. School Health for Elementary Teachers.** (2:2:0) F.S.Su. Home Study also. Staff
 Fundamental principles of the school health program and their application in elementary teaching. Designed for those preparing to teach in the elementary school.

- 362. School Health for Secondary Teachers.** (2:2:0) F.S.Su. Home Study also. Staff
Fundamental principles of the school health program and their application in secondary teaching. Designed for those preparing to teach in secondary school.
- ☐ **Botany 376. Genetics.** (3:3:0)
- 381. Program Planning in Secondary Health Education.** (3:3:0) F.S. (m) Watters
Emphasis on the role of the health specialist in integrated and concentrated programs; a study of functions, program planning, and resource materials related to school health education.
- 444. Driver Education Planning.** (2:2:0) F.Su. (m) Recommended: Health 325. James
Organization, administration, and supervision of high school driver education programs.
- 445. Driver and Traffic Education.** (4:2:4) S.Su. (m) Recommended: Health 325, 444. James
Knowledge, attitudes, and skills related to driving. Behind-the-wheel instruction, fitness of drivers, cost and care of car, traffic codes and nature's laws, highways and freeways, and adverse conditions of driving.
- ☐ **Psychology 445. Exceptional Children.** (2:2:0)
- ☐ **Sociology 449. Community Organization, Action, and Planning.** (2:2:0)
- 451. School Health and Community Relations.** (1:1:0) S. Recommended: Health 361 or 362. Duerden
Designed to increase understanding of the health relationships between the school and the community, including principles of community cooperation, disease prevention and control, and general methods of health promotion.
- ☐ **Zoology 465. Animal Physiology.** (4:4:3)
- ☒ **479. Secondary Student Teaching.** (8:8:0) F.S. Watters
- 501. Health Education Workshop.** (1-2:Arr.:0) F.S.Su. Staff
Intended primarily for extension credit and/or summer school. Involves a presentation of health education problems followed by discussions. Conducted on a workshop basis.
- ☐ **H.D.F.R. 510. Advanced Child Development.** (3:3:0)
- 521. Evaluation and Selection of School Health Material.** (2:2:0) F.S. (m) Shaw
Pamphlets, brochures, films, textbooks, and other school health resource materials are evaluated and selected for present and future use.
- 530. First-Aid Instructorship.** (2:2:1) F. (m) Staff
Designed to qualify instructors in Red Cross first aid, so that they may conduct classes to qualify individuals for standard and advanced Red Cross cards.
- ☐ **Psychology 540. Abnormal Psychology.** (3:3:2)
- ☐ **Speech 545. Public School Audiometry.** (2:2:2)
- ☐ **Graduate Education 550. Introduction to Guidance Services.** (2:2:0)
- 551. Field Work in Community Health.** (2:Arr.:Arr.) S.Su. Recommended: Health 451. Duerden
Designed to broaden understanding of community health agencies, their roles, programs, and relationships. This is accomplished by field introductions to the various official and voluntary health agencies, followed by the selection of agencies in which to do field work during the semester.

552. **School Health Services.** (2:2:0) S. (m) Staff
 Considers desirable school health services, functions and relationships to public education and educational law. Coordinates school health services with community programs.
- ☐ **Graduate Education 552. Statistical Methods.** (2:2:0)
560. **Stimulants and Depressants.** (2:2:0) F. (m) Prerequisite: course in general chemistry, Phys. Ed. 334, or equivalent. Nicholes
 The physiology and biological chemistry of stimulants and depressants.
561. **Health of the Body Systems.** (3:3:0) S. (m) Recommended: Health 560, or equivalent. Nicholes
 Advanced course in personal health dealing with the major factors in health and disease as they involve the several body systems.
- ☐ **Sociology 570. Social Relations in Medical Health Organizations.** (2:2:0)
- ☐ **Graduate Education 610. Educational Tests and Measurements.** (2:2:0)
- ☐ **Graduate Education 620. Counseling Theory and Practice.** (3:3:0)
- ☐ **Psychology 655. Psychosomatic Problems.** (2:2:0)
- ☐ **Physical Education 660. Measurement and Evaluation of Physical and Health Education.** (3:3:0)
- ☐ **Graduate Education 662. Philosophy of Program Planning.** (2:2:0)
- ☐ **Zoology 662. Advanced General Physiology.** (2:1:2)
691. **Graduate Seminar.** (0:Arr.:Arr.) Watters
 A seminar for graduate students in health and safety education. Reviews course work, testing procedures, professional agencies, and current trends in health education. All graduate students in health and safety education must register each semester.
- ☐ **Physical Education 691. Seminar in Administration and Public Relations.** (3:3:0)
692. **Research Methods in Health and Safety Education.** (3:3:0) Arr. Staff
☐ **Physical Education 692. Research Methods in Health, Physical Education, and Recreation.** (3:3:0)
693. **Research in Health Science.** (2:1:2) F.S. Staff
 Independent and/or directed research in problems associated with the health sciences. This course gives credit to those graduate students involved in directed or independent research from grant-in-aid, fellowship, or contract grant support.
694. **Seminar in Readings.** (2:2:0) S.Su. Staff
696. **Seminar in Problems.** (1:1:0) F.Su. Staff
698. **Field Project.** (1-4:Arr.:Arr.) S. Staff
699. **Thesis for Master's Degree.** (1-4:2-5:0) F.Su. Staff

History

Professors: Campbell (chairman, 336 M), Ha-fen, Poll, Swensen.

Associate Professors: Addy, Hyer, Jensen.

Assistant Professors: Allen, Bushman, Warner.

Instructors: Cardon, Perkins, Schmutz.



Requirements for a Major

A history major requires the completion of 30 hours of work in this field. Courses required are Hist. 110, 111, 120 and 121, normally taken in the freshman and sophomore years; Hist. 388, junior year; Hist. 400, senior year. Majors who seek certification in secondary education are also required to take Hist. 366. The remaining elective hours should be selected in consultation with the department adviser. Not more than 12 hours of lower division work in history may be applied toward the major.

A comprehensive examination is given to all majors in conjunction with Hist. 400.

A student deciding to major in history should immediately consult the chairman of the department, who will assist in the selection of a minor field.

The requirements for a teaching major in history and for the composite major in social sciences which includes history are found in the College of Education section.

Suggestions for a Minor

A history minor requires 14 hours of course work **not** including Hist. 170. At least 6 hours must be chosen from Hist. 110, 111, 120, and 121.

For the requirements for a teaching minor in history, see College of Education.

American History and Government Requirement

For details concerning the American history and government requirement, see "Requirements for Graduation" in the Student Academic Services section of this catalog.

Courses

- 110. World Civilization I.** (3:3:0) F.S.Su. Home study also. (G-HA m) Staff
Beginning of major world civilizations and their development to approximately 1500 A.D., with emphasis on Europe.
- 111. World Civilization II.** (3:3:0) F.S.Su. Home Study also. (G-HA m) Staff
Development of major world civilization since 1500 A.D., with emphasis on Europe.
- 120. The United States to 1865.** (3:3:0) F.S.Su. Home Study also. (G-HA m) Staff
Discovery and colonization, the American Revolution, establishment of the Constitution, foreign affairs, westward expansion, sectionalism, and the Civil War.
- 121. The United States since 1865.** (3:3:0) F.S.Su. Home Study also. (G-HA m) Staff
Civil War and reconstruction, industrialization and urbanization, American imperialism, progressivism, world wars, New Deal, and current problems.

170. **The American Heritage.** (3:3:0) F.S.Su. Home Study also. Staff
Growth of the United States under the Constitution, with emphasis on political ideas and institutions and the adaptation of the governmental system to America's role as an industrial and world power.
- **Economics 274. Economic History of the United States.** (3:3:0) (G-HA m)
300. **Early Oriental History.** (2:2:0) F. (G-HA m) Meservy
Ancient Egypt, Babylonia, Assyria, Arabia, Persia and Palestine.
304. **Greek History and Civilization.** (3:3:0) F. (Offered 1965-66 and alternate years) (G-HA m) Swensen
Survey of Hellenic and Hellenistic developments from early beginnings to the Roman conquest.
307. **Roman History and Civilization.** (3:3:0) S. (Offered 1964-65 and alternate years) Swensen, Anderson
Survey of the rise of the Roman Republic, the transition to empire and the decline and fall of the Western Roman Empire.
311. **History of the Middle Ages.** (3:3:0) S. (G-HA m) Swensen, Schmutz
Survey of the political, economic, and cultural developments in western Europe from 500 to 1300 A.D.
312. **The Renaissance: Age of Transition.** (2:2:0) F. Home Study also. (G-HA m) Jensen
The literary and artistic reawakening of Italy, the rise of commercial capitalism, beginning of the European states system, and the overseas expansion of Europe.
313. **The Reformation: Age of Turmoil.** (2:2:0) S. Home Study also. (G-HA m) Jensen
The political, economic, and cultural effects of the great sixteenth century religious upheaval, with its ensuing ideological struggles to mid-seventeenth century.
316. **Western Civilization I.** (1-2:Arr.Arr.) Su. (m) Staff
Limited to participants in the B.Y.U. Travel-Study Program.
317. **Western Civilization II.** (1-2:Arr.:Arr.) Su. (m) Staff
Limited to participants in the B.Y.U. Travel-Study Program.
323. **Europe in the Twentieth Century.** (2:2:0) S. Home Study also. (G-HA m) Cardon
Emphasis on European international affairs and on the political and economic history of the major European countries (including Russia) from World War I to the present.
330. **Russia Before 1900.** (2:2:0) F. (m) Morrell
Survey of Russian history from early beginnings to end of the nineteenth century.
331. **Russia Since 1900.** (2:2:0) S. Home Study also. (m) Mabey
Survey of modern Russia with special emphasis on the rise of communism and the development of the U.S.S.R.
332. **France Since 1610.** (3:3:0) S. Home Study also. (m) (Offered 1965-66) Jensen
Focuses on the important French contributions to modern thought, culture and institutions during the old regime and especially since the French Revolution.
333. **Modern Germany.** (3:3:0) F. (m) (Offered 1965-66) Jensen
The political, military, economic, and cultural developments of Germany during the nineteenth and twentieth centuries, with emphasis on the problem of German relationship to Western society.

- 334. Spain.** (2:2:0) F. (Offered 1965-66) (m) Addy
Political, social and economic factors in Spanish history. Emphasis on the period since 1492.
- 335. England.** (3:3:0) F. (G-HA m) Cardon
General English history from Roman era to the present. Development of English legal and political institutions, the Empire-Commonwealth, industrial revolution, recent problems and trends.
- 336x. History of England to 1714.** (2) Home Study only. (m) Cardon
Not open to students who have taken Hist. 335.
- 337x. History of England since 1714.** (2) Home Study only. (m) Cardon
Not open to students who have taken Hist. 335.
- 340. Asia.** (3:3:0) F.S. (G-HA m) Hyer, Palmer
Emphasis on China, Japan and India.
- 343. Formative Period of Chinese Civilization.** (3:3:0) F. (m) Hyer
Development of China to recent times, with emphasis on social and cultural factors.
- 344. Modern China.** (3:3:0) S. (m) Hyer
Emphasis on the development of China in the twentieth century, including the fall of the Manchu Dynasty and the rise of the Chinese Communists.
- 346. Japan.** (2:2:0) S. (Offered 1965-66 and alternate years) (m) Hyer
Survey of Japanese history with emphasis on the development of Japan since contact with the West.
- 347. India.** (2:2:0) S. (Offered 1964-65 and alternate years) (m) Hyer
Survey of the history of India including the effects of Hinduism and Islam on the political, economic and cultural development.
- 351. History of Latin America I.** (3:3:0) F. (Offered 1965-66) Home Study also. (G-HA m) Addy
Colonial period, geography, pre-Columbian civilization, conquest, and institutional development from 1492 to 1800.
- 352. History of Latin America II.** (3:3:0) S. (Offered 1965-66) Home Study also. (G-HA m) Addy
National period. The wars of independence, evolution of modern republics, inter-American relations, and institutional development from 1800 to the present.
- 353. Mexico.** (2:2:0) S. (Offered 1964-65 and alternate years) Home Study also. (m) Addy, Warner
Social, economic and political developments in Mexico since independence.
- ☐ **Political Science 357. Government and History of Canada.** (3:3:0)
- 360. The American Frontier.** (2:2:0) F.S. (m) Allen, Hafen, Larson, Warner
Highlights and significance of the westward movement in American history.
- 364. The Indian in American History.** (2:2:0) S. (Offered 1965-66 and alternate years. (m) Hafen
Survey of the major developments in the history of the leading Indian tribes including their migrations and their relationship to the United States government.
- 365. California.** (2:2:0) F. Home Study also. (m) Warner
Survey of the Spanish, Mexican and American periods in California history with emphasis on developments since the gold rush.

□ **Political Science 365. American Constitutional History.** (2:2:0)

366. **Utah.** (2:2:0) F.S. Home Study also. (m) Campbell, Larson, Poll
Emphasis on the Utah territorial period and the Mormon contribution.
Not open to freshmen or sophomores.

□ **Political Science 371. Development of American Foreign Policy.** (3:3:0)

373. **American Intellectual History.** (2:2:0) S. (G-HA m) Bushman
A survey of the development of ideas, attitudes and philosophies in the United States in historical sequence and perspective.
379. **Contemporary United States History.** (3:3:0) S. (G-HA m) Perkins
An examination of the major domestic and foreign problems of the United States in four crucial decades, with special emphasis on their relevance for contemporary society.
388. **Historiography.** (3:3:0) F.S.Su. (m) Purdy, Swensen, Schmutz
Fundamental problems and types of historical analysis and interpretation, philosophies of history, and work of outstanding historians.
400. **Historical Research and Writing.** (3:3:0) F.S.Su. Prerequisite: Hist. 388. Staff
Sources, materials and methods of historical research and writing, including critical analysis of research project. Required of all history majors in the senior year.
479. **Honors Readings.** (1-2:0:Arr.) F.S.Su. Staff
498. **Directed Readings.** (1-2:0:Arr.) F.S.Su. Staff
512. **Medieval Thought and Culture.** (3:3:0) S. (Offered 1964-65 and alternate years) (m) Swensen
Study of the basic Medieval achievements in philosophy, science, theology, literature, and education.
520. **Eighteenth Century Europe.** (2:2:0) S. (Offered 1964-65 and alternate years) (m) Addy
Survey of developments in Europe from approximately 1680 to the beginning of the French revolution including developments of political thought, science and philosophy in the Enlightenment.
522. **Nineteenth Century Europe.** (2:2:0) S. (Offered 1964-65 and alternate years) (m) Cardon
Political, economic, social, and intellectual history of Europe from 1815-1914.
525. **European Diplomatic History since 1815.** (2:2:0) S. (Offered 1965-66) Cardon
Interprets "diplomacy" broadly. Emphasis on the relationship between European diplomatic history and the domestic history of the major world powers, including the U. S. and Russia.
528. **Modern European Thought and Culture.** (2:2:0) F. (Offered 1965-66) Jensen
The great intellectual and cultural currents of the seventeenth, eighteenth, and nineteenth centuries, and their impact on modern history.
548. **Culture of Asia.** (2:2:0) S. (Offered 1965-66 and alternate years) Hyer
562. **American Westward Movement to 1825.** (3:3:0) F. (m) Hafen
Emphasis on the early colonization and westward movement east of the Mississippi.
563. **American Westward Movement after 1825.** (3:3:0) S. (Offered 1965-66 and alternate years) (m) Hafen
Emphasis on the fur trade and colonization in the trans-Mississippi West.

570. **Colonial America and the Revolution.** (3:3:0) F. (Offered 1965-66 and alternate years) (m) Backman
The foundation of colonies in America, Anglo-American conflict and the revolution, the Confederation and the Constitution.
575. **The Early American Republic.** (3:3:0) (Offered 1965-66 and alternate years) (m) Campbell
Political, social, economic, and diplomatic development and westward expansion during the Federalist, Jeffersonian, and Jacksonian Eras.
577. **Civil War and Reconstruction.** (2:2:0) S. (Offered 1964-65 and alternate years) (m) Poll
The Civil War as the testing of the American political system and as a problem in historical causation.
578. **The Emergence of Modern America.** (3:3:0) S. (Offered 1964-65 and alternate years) (m) Perkins
The transition of the United States from a rural and agrarian to an urban and industrial society, and the rise of the United States to world power.
585. **Historical Geography of the United States.** (2:2:0) S. (Offered 1964-65 and alternate years) (m) Staff
The bearing of climate, resources, and other geographical factors upon American development.
606. **Greek Thought.** (2:2:0) F. (Offered 1965-66 and alternate years) Swensen
Study of Greek intellectual and philosophical thought, and its relationship to Greek institutions.
- 618. **Problems in Early Modern Europe.** (2:2:0) F. (Offered 1965-66) Jensen
Extensive reading, analysis and interpretation of selected historical problems of the sixteenth, seventeenth, and eighteenth centuries.
- 621. **Problems in Modern Europe.** (2:2:0) S. (Offered 1964-65) Cardon, Jensen
Extensive reading, analysis, and interpretation of selected historical problems of the nineteenth and twentieth centuries.
640. **The Far East.** (2:2:0) F. (Offered 1964-65 and alternate years) Hyer
Selected problems in the Far East with emphasis on India, China, and Japan.
650. **Latin America.** (2:2:0) S. (Offered 1965-66 and alternate years) Addy
An advanced study of the generalized historical development of Latin America—colonial and national periods considered.
656. **Southwestern United States.** (2:2:0) S. (Offered 1965-66 and alternate years) Hafen
Selected problems in the area of Spanish colonization and United States fur trappers.
667. **Northwestern United States.** (2:2:0) F. (Offered 1964-65 and alternate years) Hafen
History of the Oregon Territory as it developed into the states of Washington, Oregon, and Idaho.
- 670. **Readings and Problems in Colonial America and the Revolution.** (3:3:0) F. (Offered 1964-65 and alternate years) Backman
- 675. **Readings and Problems in the Early American Republic (1789-1848).** (3:3:0) F. (Offered 1964-65) Campbell
- 677. **Readings and Problems in Civil War and Reconstruction.** (3:3:0) S. (Offered 1965-66) Poll
- 678. **Readings and Problems in the Emergence of Modern America (1880-1920).** (3:3:0) S. (Offered 1964-65) Perkins

- 679. Readings and Problems in Contemporary United States History (1920-Present). (3:3:0) S. (Offered 1965-66 and alternate years) Poll
- 694. Seminar in European History. (2:2:0) S. Staff
- 695. Seminar in Western American History. (2:2:0) F. Staff
- 696. Seminar in United States History. (2:2:0) S. Staff
- 697. Seminar in Utah History. (2:2:0) F. Staff
- 698. Special Readings in History. (1-2:0:Arr.) F.S.Su. Staff
- 699. Thesis for Master's Degree. (1-4:0:Arr.) F.S.Su. Staff
- 799. Dissertation for Doctor's Degree. (1-4:0:Arr.) F.S.Su. Staff



Three distinguished members of the History Department faculty consulting

Homemaking Education

Professors: Cannon, Knowles, Moss, Porter.

Assistant

Professors: V. Poulson (in charge, 2230-A
SFLC), Barnett.

Instructor: Huff.



The curriculum in homemaking education is one of the major programs in the Department of Family Life Education. The other major program is human development and family relationships.

Principal objectives are as follows:

1. To integrate knowledge from root disciplines and from college departments into the composite homemaking program for high schools.
2. To prepare prospective teachers for vocational certification enabling them to teach homemaking in secondary schools of the United States.
3. To assist in the preparation of cooperating teachers and supervisors of home economics in secondary schools and to prepare teachers of home economics for junior colleges.

Majors desiring to receive a bachelor's degree with a (composite) major and minor in family living and a homemaking certificate from the State Department of Public Instruction to teach homemaking in junior and senior high schools of the United States are required to maintain a cumulative grade-point average of 2.25 or above and complete the following program:

1. College of Family Living Required Courses—48 hours:

Homemaking Ed. 101 and 375—4 hours.

H.D.F.R. 210, 322, 361—9 hours.

Nursing 288—1 hour.

Food & Nutr. 255, 264, 265, 340—12 hours.

Hous. & Home Mgt. 250 (201 or 330 or 380), 335, 351, 370—12 hours.

Clo. & Text. 110, 165, 235 or 300, 260—11 hours.

2. General Education Requirements—64-66 hours:

Freshman Eng.—4-6 hours.

Biol. Sci.—8 hours.

Bact. 121

Zool. 105

Health 130

Humanities and Aesthetics—9 hours.

Art 101 or 110

Lit.

Elective

Four to five credit hours selected from the following:

Math. 105

Statistics 221

Art 132

Relig. 381

Psych. 374

Lang. (If 12 hours of language is elected, it will fulfill the new requirement, and three hours may be used toward the humanities requirement.)

Phys. Ed.—2 hours.

Relig.—16 hours.

Soc. Sci.—5 hours.

Psych. 111

H.D.F.R. (Three credit hours from H.D.F.R. courses may be used for social sciences.)

Sociology recommended.

Hist. 170—3 hours.

Phys. Sci.—11-13 hours.

Chem. 101

Chem. 151—4-5 hours.

Physics 100, Geol. 101, or other physical science.

3. Professional Education Courses—21 hours.

Tchr. Ed. 301

Tchr. Ed. 310

Health Ed. 362

Homemaking Ed. 377, 479

Tchr. Ed. 304, 415

Students desiring specialty in any of the departments of the College of Family living should see their adviser for a program plan.

Suggested Program for Majors Desiring Certification

Freshman Year

	F	S
Relig.	2	2
Eng. (composition)	3	3
Chem. 101	4-5	
Chem. 151		4-5
Clo. & Text. 110		2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Math 105 or lang.*	3	
Bact. 121		3
Art 101 or 110		2
Health 130	2	
Homemaking Ed. 101	1	

Total Hours $15\frac{1}{2}$ - $16\frac{1}{2}$ $16\frac{1}{2}$ - $17\frac{1}{2}$
 (*If student elects a language, Chem. 101 may move to Spring Semester and other courses may be adjusted. See adviser for program plan.)

Sophomore Year

	F	S
Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Psych. 111	3	
H.D.F.R. 210		3
Zool. 105		3
Hous. & Home Mgt. 250		2
Food & Nutr. 255	5	
Food & Nutr. 264, 265 ..		5
Clo. & Text. 165	4	
Eng. lit.	3	
Nursing 288		1

Total Hours $17\frac{1}{2}$ $16\frac{1}{2}$

Junior Year

	F	S
Relig.	2	2
H.D.F.R. 361	3	
Tchr. Ed. 301	2	
Hous. & Home Mgt. 330, 380 or 201		3
Hous. & Home Mgt. 351		2
H.D.F.R. 322		3
Food & Nutr. 340	2	
Clo. & Text. 235 or 300		2
Clo. & Text. 260	3	
Homemaking Ed. 375	3	
Homemaking Ed. 377		3
Health Ed. 362		2
Hous. & Home Mgt. 335	3	

Total Hours 18 17

Senior Year

	F	S
*Homemaking Ed. 479		8
*Hous. & Home Mgt. 370		2
*Tchr. Ed. 304		2
*Tchr. Ed. 310		2
*Tchr. Ed. 415		2
Hist. 170		3
Relig.		4
Humanities & new requirement		6
Electives		3

Total Hours 32

*Block courses—see adviser for arrangement.

Courses

101. **Concepts of Homemaking Education.** (1:1:0) F.S. Staff
Basic concepts from science, art, and philosophy essential to an understanding of the composite homemaking curriculum as preparation is begun for teaching in secondary schools.
375. **Curriculum Development in Homemaking Education.** (3:3:0) F.S. Staff
Curriculum development, varieties of learning experiences, and comprehensive techniques are considered with preparation of illustrative material for aid in teaching secondary classes.
377. **Secondary Teaching Procedures.** (3:3:Arr.) F.S. Prerequisite: Homemaking Ed. 375. Staff
See Tchr. Ed. 377.
479. **Secondary Student Teaching.** (8:1:Arr.) F.S. Staff
Supervised teaching carried on in an approved homemaking department of a public school. See Tchr. Ed. 479.
521. **Workshop in Homemaking Education.** (2:2 wks. 8 hrs./day) Su. Prerequisite: permission of instructor. Staff
Intensive study of application of principles and theory in homemaking education.
530. **Homemaking Education for Adults.** (2:2:0) Su. Prerequisite: permission of instructor. V. Poulson
The principles, practices, programs, materials, and resources for teaching homemaking education to adults.
532. **Evaluation in the Teaching of Homemaking Education.** (2:2:0) Su. Prerequisite: Tchr. Ed. 479 and permission of instructor. V. Poulson
Analysis of evaluation techniques and construction of workable evaluation devices unique to the teaching of homemaking education.
630. **Methods and Curriculum in Homemaking Education.** (3:3:0) Su. Prerequisite: minimum of one year teaching experience. V. Poulson
Intensive study of methods of teaching and curriculum development for homemaking programs in the secondary schools.



Students in homemaking education receiving expert instruction

Horticulture



Associate
Professor: Ashton.

Assistant
Professor: Reimschuessel (chairman, 109 HGB)

The Department of Horticulture offers undergraduate training in (1) fruit production (pomology), (2) floriculture and greenhouse management, (3) landscape maintenance, (4) ornamental horticulture and nursery management, or (5) turf management.

A student majoring in the Department of Horticulture must meet the entrance and graduation requirements of the College of Biological and Agricultural Sciences. Horticulture majors are required to take, preferably during the freshman and sophomore years, one course from each of the following areas: Agr. Econ. 112, 320, 325; Agron. 282, 302, 305; An. Sci. 161, 207 or 347.

A student planning to obtain an advanced degree is advised to take additional courses in chemistry, mathematics, and one year of foreign language, preferably French or German.

Students specializing in pomology are required to take the following: Hort. 101, 103, 310, 317, 350, 402, 455, 457. Recommended courses: Agron. 282, 302, 305, 451 and 459; Bot. 101, 276, 440, 450, 480; Chem. 105 and 106 or equivalent courses; Zool. 105 and 334. A four-year course outline is available from the department. A recommended course outline for the freshman and sophomore years is as follows:

Freshman Year			Sophomore Year		
	F	S		F	S
Eng. 111, 112	3	3	Relig.	2	2
Relig.	2	2	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Hort. 310		2
Health 130		2	Bot. 276	3	
Math. 105 and 106	5	5	An. sci.		3
Bot. 101	3		Eng. 250	3	
Hort. 101	3		Agron. 282		3
Hort. 103		3	Chem. 105, 106	5	5
Forum assy.	$\frac{1}{2}$	$\frac{1}{2}$	Agr. Econ. 112	3	
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	Forum assy.	$\frac{1}{2}$	$\frac{1}{2}$
Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$	Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$
			Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$

Students emphasizing floriculture and greenhouse management are required to take the following: Hort. 103, 112, 207, 318, 402, 471; Agron. 282, 305, 459; Bot. 101, 112, 276, 321, 440, 480; Chem. 105 and 106. Zool. 105, 230, and 334 are recommended. If emphasis is placed on floral designing, the following courses are required: Hort. 103, 112, 208, 318; Art 110, 314, 415; Hous. & Home Mgt. 330 and 410. A recommended four-year course outline is available for the department. A recommended course outline for the freshman and sophomore years is as follows:

Freshman Year			Sophomore Year		
	F	S		F	S
Eng. 111, 112	3	3	Eng. 250	3	
Health 130	2		Art 110	2	
Bot. 101		3	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Relig.	2	2
Relig.	2	2	Bot. 276	3	
Hist. 170	3		Zool. 105		3
An. sci.		3	Chem. 105	5	
Agron. 282	3		Hort. 318		4
Hort. 103	3		Hort. 112, 402	2	3
Hort. 207		3	Soc. sci.		2
Agr. Econ. 112		3	Agron. 282		3
Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$

Suggested minor fields: agronomy, economics, sociology.

Students in ornamental horticulture and nursery management are required to take Hort. 101, 103, 207, 312, 317, 402, 416, 430, and 471; Bot. 101, 105, 210, 440; Agron. 282, 302, 305, 451, 459; Zool. 105 and 334. A course outline for freshmen and sophomores is as follows (A four-year course outline is available from the department.):

Freshman Year			Sophomore Year		
	F	S		F	S
Eng. 111, 112	3	3	Relig.	2	2
Relig.	2	2	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Eng. 250	3	
Health 130	2		Art 110	2	
Bot. 101	3		Bot. 105, 110	3	3
Hist. 170		3	Zool. 105	3	
An. sci.		3	Chem. 105	4	
Geol. 111	4		Agron. 282		3
Hort. 101	3		Hort. 312		3
Hort. 207		3	Hort. 317		2
Agr. Econ. 112		3	Agron. 302		3
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$

Suggested minor fields: agronomy, economics, sociology.

Students emphasizing landscape maintenance are required to take Hort. 101, 103, 312, 317, 402, 416, 430, and 471; Agron. 282, 302, 451; Bot. 101, 110, 205, 440, 480; Chem. 105; Art 110. (A recommended course outline is available from the department.)

Students in turf management are required to take Hort. 103, 207, 319, 402, 471; Bot. 101, 105, 110, 440; Agron. 282, 305, 451, 459; Zool. 105 and 334. (A recommended course outline is available from the department.)

Students minoring in horticulture may select 14 hours from the following: Hort. 101, 103, 207, 310, 312, 319, 350, 402, 416 or Bot. 205; Agron. 351 and 459.

Courses

- 101. General Horticulture.** (3:2:3) F.S. Home Study also. (m) Ashton
Principles and practices underlying the profitable production of trees, fruits, small fruits, and vegetables are considered; also, sites, soils, fertilizers, varieties, culture, pest problems, harvesting, storage, and propagation.
- 103. Beautifying the Home Grounds.** (3:3:0) F.S. (m) Reimschuessel
Principles of design and composition as applied to home ground development and related plant culture.
- 107x. Floriculture.** (2:0:0) Home Study only. (m) Reimschuessel
Herbaceous plant culture in the greenhouse and out-of-doors.
- 112. Flower Arrangement.** (2:1:2) F.S. Reimschuessel
Principles and methods of arranging flowers and other plant materials for decorative use in the home and for exhibition.

207. **Floriculture.** (3:2:3) F. (Offered 1964-65 and alternate years) Reimschuessel
Herbaceous plant culture in the greenhouse and out-of-doors.
310. **Small-Fruit Production.** (2:2:0) S. (Offered 1965-66 and alternate years) Ashton
(m) Cultural methods, and handling of grapes, strawberries, raspberries, blackberries, and other bush type and dwarf fruits in home and commercial plantings are considered.
312. **Practical Orchard Management.** (3:0:5) S. (Offered 1964-65 and alternate years) Ashton
Practical training in the culture of tree fruits and small fruits, including pruning, fertilizing, fruit thinning, and pest control.
317. **Nursery Practice.** (2:1:2) S. (Offered 1964-65 and alternate years) Reimschuessel
Prerequisite: Hort. 101 or 103 or equivalent.
Principles underlying the profitable management of a nursery: site, soil, culture, and handling of nursery stock, transplanting, propagation, and pest problems.
318. **Greenhouse Production.** (4:2:4) S. (Offered 1965-66 and alternate years) Reimschuessel
Prerequisites: Hort. 207 or equivalent.
Principles underlying the management of a greenhouse; cultural practices of growing indoor plants emphasized.
319. **Turf Management.** (2:1:2) F. (Offered 1965-66 and alternate years) Reimschuessel
(m) Prerequisite: Hort. 207 or equivalent.
The management of turf grasses as related to climate, soil and use on the golf course, park and private areas.
340. **Vegetable Crops.** (3:2:2) S. (Offered 1965-66 and alternate years) Staff
Selection, cultural practices, harvesting, storage and marketing of vegetable crops.
350. **Pomology.** (3:3:0) F. (Offered 1965-66 and alternate years) Reimschuessel
Hort. 101. Ashton
Fruit varieties with respect to their development and uses. Special emphasis given to harvesting, handling, and storage problems.
402. **Plant Propagation.** (3:2:2) F. (Offered 1964-65 and alternate years) Ashton
(m) Principles and practices of plant propagation of herbaceous and woody plants with special emphasis on fruit and ornamental plants.
416. **Ornamental Woody Plants.** (3:2:2) S. (Offered 1964-65 and alternate years) Reimschuessel
(m) Recommended: Bot. 110.
Identification, culture, and use of important ornamental woody plants in Utah.
430. **Landscape and Planting Design.** (3:0:6) F. (Offered 1965-66 and alternate years) Reimschuessel
Prerequisite: Hort. 103; drawing recommended.
Designs and plant combinations for private and public grounds using woody and herbaceous plants.
455. **Advanced Pomology.** (3:3:0) S. (Offered 1964-65 and alternate years) Ashton
Prerequisite: Hort. 101.
Problems related to the establishing and maintaining of deciduous orchards.
- **Agronomy 459. Plant Breeding.** (2:2:0)
471. **Pest Control in Orchards and Field Crops.** (3:3:0) F. Prerequisites: Hort. 101, Bot. 101; recommended: Bot. 470. Ashton
Culture, chemical, biological methods, and machines used in control of pests and diseases of orchard and field crops.
- **Botany 480. Diseases of Cultivated Plants.** (3:2:3)
- 491, 492. **Seminar.** (1:1:0 ea.) F.S. Staff
For majors in senior year. Current literature in horticulture reviewed.
- 495, 496. **Special Problems in Horticulture.** (1-3:Arr.:Arr. ea.) F.S. Staff

Housing and Home Management

Professor: Cutler.

Associate

Professor: J. Poulson (chairman, 2246 SFLC).

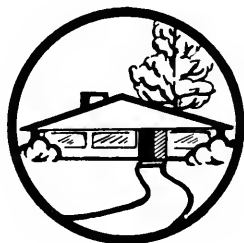
Assistant

Professor: Bastian.

Instructors: Allen, Huff.

Special

Instructors: Barlow, Lewis, Vincent.



Housing and home management is concerned with the achievement of individual and family goals through the thoughtful use of resources—human: knowledge, skills, attitudes; and nonhuman: time, money, property and community facilities. Professional interests are served through two areas of emphasis, with an option for a major in either home management or housing.

Courses of study in home management are designed to help the student in the management and decision-making process whereby optimum personal and family development may be achieved. Courses of study in housing are designed to help in planning, furnishing, and decorating the home. In addition, students receive a broad liberal education.

The choice of options should be made as early as possible if requirements are to be completed during eight semesters.

Students electing a major in home management prepare for employment in home economics extension service; as demonstrators for utility and appliance companies, and for other positions for which a background in home management is desired. Valuable preparation may also be gained for graduate study leading to college teaching and research.

Students electing a major in housing prepare for an apprenticeship as home planning and decoration consultants or for such positions as buyers of home furnishings. They, too, gain valuable preparation for graduate study leading to college teaching.

Those interested in further information about employment opportunities and curriculum requirements should consult the department chairman or their appointed adviser.

Recommended minors for home management include economics, sociology, food and nutrition, clothing and textiles, journalism, family life education, and others. Recommended minors for housing include art, business management, journalism, and others.

The curricula outlined below provide for the following:

1. The 12-hour college requirement with at least three hours in each of the three departments outside the major.
2. The requirements for the major option.
3. The requirements for general education and for the B.S. degree.

Some substitution in course selection may be desirable for male students, who are urged to consult with the department chairman. Summer work experience in line with professional goals is highly desirable and should be planned with the adviser.

Suggested four-year program for majors in housing and home management with emphasis on management.

Freshman Year			
	F	S	
Relig.	2	2	
Health 130	2		
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	
Eng. 111, 112	3	3	
Bact. 121	3		
Math 105 (or other class according to students' needs)	3		
Clo. & Text. 110	2		
Zool. 105		3	
Chem. 101		4-5	
Sociol. 111		3	
Total Hours	15 $\frac{1}{2}$	15 $\frac{1}{2}$ -16 $\frac{1}{2}$	

Junior Year			
	F	S	
Relig.	2	2	
Food & Nutr. 115	2		
or			
Food & Nutr. 255*	5		
H.D.F.R. 361	3		
Hous. & Home Mgt. 335, 351	3	2	
Clo. & Text. 165	4		
Hous. & Home Mgt. 220, 380	2	3	
Hist. 170		3	
Food & Nutr. 340		2	
Electives	2	5	
Total Hours	18	17	

Sophomore Year			
	F	S	
Relig.	2	2	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	
Clo. & Text. 260	3		
Chem. 151	4-5		
Econ. 101	3		
Hous. Home Mgt. 201 ..	3		
Art 110	2		
Food & Nutr. 264-5		5	
Physics 100**		3	
Hous. Home Mgt. 250		2	
Psych. 111		3	
Elective		2	
Total Hours	17 $\frac{1}{2}$ -18 $\frac{1}{2}$	17 $\frac{1}{2}$	

Senior Year			
	F	S	
Relig.	2	2	
Journ.	3		
Hous. & Home Mgt. 460, 590	2	2	
Hous. & Home Mgt. 370, 410	2	3	
Hous. & Home Mgt. 595, 520	1-2	2	
Lit.		3	
Electives	7	6	
Total Hours	17-18	18	

A minor in this option may be defined through individual consultation with this and the major department.

*If elected, omit Clo. & Text. 165 and take it another semester.

**Other suggested classes to fulfill physical science requirements are Zool. 176 and Bact. 321.

22 hours of electives to fulfill requirements for the minor, physical science and humanities and aesthetics requirements.

Suggested four-year program for majors in housing and home management with emphasis on housing.

Freshman Year			
	F	S	
Relig. 121, 122	2	2	
Eng. 111, 112	3	3	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	
Health 130	2		
Psych. 111	3		
Bact. 121		3	
Art 120, 121A	3	3	
Hous. & Home Mgt. 201 ..		3	
Electives	3	2	
Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$	

Sophomore Year			
	F	S	
Relig.	2	2	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	
Lit.	3		
Humanities	3		
Econ.	3		
Food & nutr.	2		
Hous. & Home Mgt. 250 ..	2		
Bot. 101		3	
Hist. 170		3	
Clo. & Text. 260		3	
Hous. & Home Mgt. 220 ..		2	
Hous. & Home Mgt. 330 ..		3	
Total Hours	15 $\frac{1}{2}$	16 $\frac{1}{2}$	

Junior Year			Senior Year		
	F	S		F	S
Relig.	2	2	Relig.	2	2
Hous. & Home Mgt. 380, 381	3	3	Art 306	3	
Phys. Sci. 101, 102	3	3	Hous. & Home Mgt. 410	3	
Bus. Mgt. 347	3		Hous. & Home Mgt. 351	2	
or			Hous. & Home Mgt. 595	1	
Hous. & Home Mgt. 460	2		Clo. & Text. 430		2
Art 415	3		H.D.F.R. 360		3
Commun. 211		3	Hous. & Home Mgt. 590		2
Hous. & Home Mgt. 335		3	Electives	6	8
Art 417		3			
Elective	2		Total Hours	17	17
Total Hours 15 or 16					

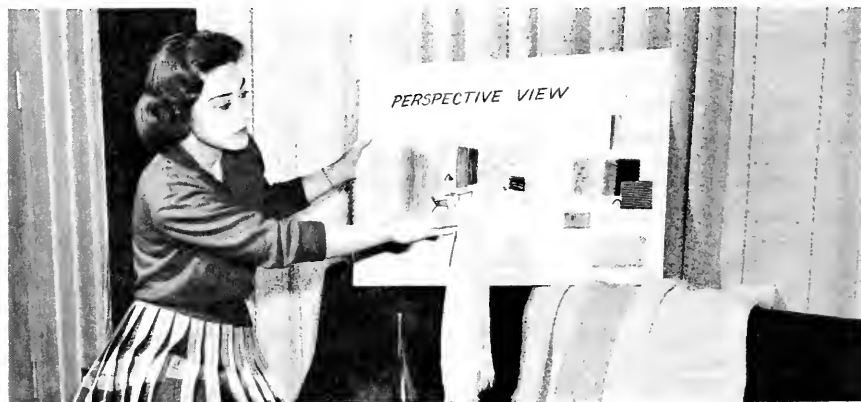
This schedule includes all general education requirements except the 9 hours of science or 12 hours of a language which must be included in the 25 hours which are indicated as electives.

Suggested minor: Art.

Courses

- 170. Economics of the Household.** (2:2:10) F.S.Su. (m) Cutler
Application of principles of home management in group housing situations where L.D.S. ideals of industry, thrift, efficiency, and individual and family honor can be developed.
- 201. Family Housing.** (3:3:0) F.S.Su. (m) Viehweg
Traditional and contemporary American housing with reference to technological and style development, rural and urban differences, class values, and social controls.
- 220. Home Furnishings.** (2:1:3) F.S.Su. (m) Barlow
Selection and care of home furnishings with laboratory practice in refinishing furniture and constructing draperies, lamp shades, slip covers, bedspreads, etc.
- 221. Weaving.** (2:1:3) F.S. Barlow
Creative design applied to woven fabrics with experience in weaving methods. Survey of hand-woven fabrics in various world cultures.
- 330. House Planning.** (3:3:0) F.S.Su. (m) Prerequisite: Art 120; may be waived by permission of department chairman. Stanford, Viehweg
Choice of location, area development, and structural design of the family residence.
- 335. Household Equipment.** (3:2:2) F.S.Su. (m) Vincent
Classroom and laboratory experience in the comparison, selection, and use of different types of household equipment.
- 350. Home Management.** (2:2:0) F.S.Su. (m) Prerequisite: Sociol. 111 or Psych. 111. Lewis
Open to men and women. Management in its relation to functions of the family in society. Decision-making in the management of human and nonhuman resources to attain family goals.
- 351. Family Finance.** (2:2:0) F.S.Su. (m) Prerequisites: Econ. 101 and Sociol. 111. Open to men and women. J. Poulson
Economic problems of direct concern to the family today. Types and adequacy of income and its apportionment in terms of family needs and interests.

370. **Home Management House.** (2:2:10) F.S.Su. Prerequisites: Hous. & Home Mgt. 250, 351, 355; Food & Nutr. 340. Lewis
Experience in applying principles of home management in a family-size group in a family-type house. \$40.00 laboratory fee.
380. **Interior Decoration.** (3:3:0) F.S. (m) Prerequisite: Hous. & Home Mgt. 201, 220, 330; may be waived by permission of department chairman. Allen
Principles of design applied to home decoration. Individual projects in the development of styles in prominence today.
381. **Interior Decoration.** (3:3:0) S. Prerequisite: Hous. & Home Mgt. 380. Allen
Decoration of the home with emphasis on specific rooms and areas. Alternative uses of natural and artificial lighting, accessories, table settings, etc.
410. **Field Work in Housing and Home Management.** (3:0:6) S. Prerequisites: Hous. & Home Mgt. 330, 380, 381, 335, 351, 360, 370, 460, and 520. Staff
Faculty supervised participation in professional activity involving recognition of a problem, possible solutions, implementation of the solution chosen and evaluation of attained results.
435. **Advanced Household Equipment.** (2:1:2) S. Staff
Composition of soil and principles involved in removal. Characteristics of supplies for cleaning and protecting surfaces. Operation of automatic equipment for producing heat and for cooling.
460. **Consumers in the Market.** (2:2:0) F. (m) Prerequisites: Econ. 101, Psych. 111, and Sociol. 111. J. Poulson
Consumers' role in the marketing system; consumer decision-making with respect to market goods and services; evaluation of information sources for consumer buyers; consumer protection programs.
520. **Management of Time and Human Resources.** (2:2:0) S. (Offered 1964-65 and alternate years) (m) Prerequisites: Econ. 101, Sociol. 111, and Psych. 111. J. Poulson
Perspectives concerning time and human resources in family life. Concepts and principles related to the use of these resources for furthering attainment of family goals.
590. **Seminar.** (2:0:3) S. J. Poulson
595. **Readings and Projects.** (1-2:1-2:0) F.S.Su. J. Poulson
Consultation and directed use of library and laboratory materials.



Home furnishings and interior decorating—important aspects of home management

Human Development and Family Relationships

Professors: Porter (chairman, 1239 SFLC),
Cannon, Knowles, Moss.

**Associate
Professor:** Rollins.

**Assistant
Professors:** Laws, Barlow.

Instructors: Jensen, Larsen, Orrock, Peterson,
Taylor, Tyndall, Valentine.

**Special
Instructor:** Loosli.



The curriculum in human development and family relationships is one of the major programs in the Department of Family Life Education. The other major program is homemaking education.

Among the purposes of the major in human development and family relationships are the following:

1. To provide opportunities for increased understanding and appreciation of abundant and harmonious living within the family, including its relationship to the church and the community.
2. To help students gain increased self-understanding and appreciation of insight and skills basic to effective human relationships.
3. To provide opportunities for the study of human development and family relationships from infancy through old age which will
 - (a) facilitate the achievement of successful marriage and parenthood and
 - (b) lead to professional competency for those who are interested in vocational opportunities in this field.
4. To provide opportunities for research which will ultimately contribute to increased understanding of human development and family relationships.
5. To provide graduate training leading to a master's degree and Ph.D. degree in human development and family relationships.

The B.Y.U. human development laboratories are among the most modern and up-to-date in the nation. Through the laboratories of the University and the facilities of the community, opportunities are provided for the study of human development and family relationships from infancy through old age.

Outstanding students in H.D.F.R. have the opportunity to enhance their professional training by attending one semester at the Merrill-Palmer Institute in Detroit, Michigan, with which the College of Family Living has an affiliation.

Suggestions for a Minor

For a minor in human development and family relationships, a selection of 14 credit hours from the following courses is suggested: H.D.F.R. 210, 322, 323, 360, 361, 412, 422, 460, 570.

Requirements for a Major

For a major in human development and family relationships, a minimum of 26 credit hours is required. A maximum of 7 of the 26 hours may be chosen from a selected list of courses in other departments with consent of the departmental adviser. For graduation from the College of Family Living these hours must be combined with enough credits in the college to total 35 semester hours. Each student must complete a minimum of 12 semester hours in the College of Family Living outside of the department in which he is taking his major. These 12 credit hours must include a minimum of three hours in each of the depart-

ments of clothing and textiles, housing and home management, and food and nutrition. (Men, see department chairman for course selection.)

A student majoring in H.D.F.R. may take either 12 hours of a foreign language or 9 hours from those courses which have been approved for fulfilling the mathematics, statistics, logic, and science courses. If the student elects the latter option, the course work must come from at least two different departments.

Suggested Program for Majors

Freshman Year		Junior Year	
	Hours		Hours
Relig.	4	Relig.	4
Freshman Eng. (determined by placement test)	6	Eng. (lit.)	3
Phys. ed. and Health 130	4	Hous. & home mgt.	2
Phys. sci. group	6	Food & Nutr. 245 (women) ...	2
Psych. 111	3	H.D.F.R. 323	3
Humanities group	2	H.D.F.R. 360	3
Clo. & text.	4	H.D.F.R. 361	3
Food & nutr.	2	H.D.F.R. 412	3
H.D.F.R. 261	2	Electives	6-10
Total Hours	33	Total Hours	29-33
Sophomore Year		Senior Year	
	Hours		Hours
Relig.	4	Relig.	4
Bact. 121	3	H.D.F.R. 422	4
Zool. 105	3	H.D.F.R. 460	3
Sociol. 111	3	H.D.F.R. 492	2
Hist. 170	3	H.D.F.R. 570	2
Humanities and aesthetics	2-4	Electives	13
Hous. & home mgt.	2	Total Hours	28
H.D.F.R. 210	3		
Electives	6-10		
Total Hours	29-35		

Specialized Programs

Students specializing in child development and/or nursery education must also take H.D.F.R. 323 and 422.

Students specializing in professional work with families must also take H.D.F.R. 440, 461, and 580.

Students who are interested in teaching family life education in the junior and senior high schools and/or in preparing for teaching seminary may choose a composite major in family life education and upon the successful completion of the program of study be recommended for secondary certification. Requirements include H.D.F.R. 210, 322, 360, 361, 460, 492, 566, 570, 575; Psych. 321 450; Sociol. 403, plus the courses required for teacher certification as outlined by the College of Education.

For H.D.F.R. Majors Who Wish to Qualify for Elementary Teaching Certificate

The successful completion of the following program will (a) provide a major in human development and family relationships, (b) qualify a student for an elementary teaching certificate with a kindergarten efficiency statement attached, (c) satisfy the general education requirements for the University, and (d) complete the College of Family Living graduation requirements. **Students will be prepared to teach nursery school, kindergarten, and grades one through six.** To enter and to continue in the teacher certification program and the Human Development Laboratory Program, a student must have a 2.25 cumulative grade-

point average and must maintain this average each succeeding semester. A student who falls below this average will be suspended from the sequence courses but may re-enter the program after he brings his grades up to the required level. A student who is suspended from the program a second time may not again re-enter without the specific approval of the appeals committee.

In determining grade-point average, transfer credit may be used for only the first semester of attendance at B.Y.U. After this initial semester the grade-point average will be determined by using B.Y.U. grades only.

Students will be assigned to Cycle I or II to distribute registration in certain classes evenly throughout the year. Therefore, the semester in which one enrolls in a particular course may vary slightly from the outline which follows:

Freshman Year			Junior Year		
	F	S		F	S
Relig.	2	2	Relig.	2	2
Phys. sci. group*	3	3	Bact. 321 or Stat. 221†	3	
Eng. 111, 112	3	3	H.D.F.R. 323, 422	3	4
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Hous. & Home Mgt. 351	2	
Zool. 105, 176	3	3	Music 237	2	
Art 101 or 108 or 110 ..	2		Phys. Ed. 375	2	
Clo. & text.	4		Tchr. Ed. 310, 320	2	3
Health 130		2	Tchr. Ed. 340		2
Music 102		2	Health Ed. 361		2
Psych. 111		3	H.D.F.R. 360		3
			H.D.F.R. 412		3
Total Hours	17 $\frac{1}{2}$	18 $\frac{1}{2}$			
Sophomore Year			Senior Year		
	F	S		F	S
Relig.	2	2	Relig.	2	2
Art 226	2		Tchr. Ed. 321, 304	3	2
Hist. 170	3		Tchr. Ed. 322, 406	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Tchr. Ed. 449, 415	8	2
Dram. Arts 121	3		Hist. 360 or 365 or 366	2	
Food & Nutr. 115	2		Food & Nutr. 245		2
H.D.F.R. 210, 361	3	3	H.D.F.R. 492		3
Bact. 121	3		H.D.F.R. 460		3
Tchr. Ed. 200, 301	0	2	Tchr. Ed. 422		2
Math 305		3			
Eng. (lit.)		3	Total Hours	17	18
Hous. & Home Mgt. 250		2			
Tchr. Ed. 325		2			
Total Hours	18 $\frac{1}{2}$	17 $\frac{1}{2}$			

A student may reduce the hours of religion credit listed by registering for devotional each semester.

*This group may be filled by choosing 6 semester hours from the following courses: Chem. 100 and 104, Geol. 101 and 102, or Physics 100, 127, 137.

†Not required of those who choose to complete 12 semester hours in a foreign language.

A maximum of seven credit hours from courses listed here from other departments may be selected to apply toward a major in H.D.F.R.

Courses

☐ **Anthropology 101. Introductory Anthropology.** (3:3:0)

210. Child Development. (3:3:1) F.S (G-SS m) Prerequisite: Psych. 111; recommended: Sociol. 111. Tyndall, Staff

Consideration of the growth and development of the child and his relationships with his family, peers, and teachers from infancy through adolescence. One hour observation per week as part of preparation.

- 261. The Latter-day Saint Family.** (2:2:0) F.S. Knowles, Staff
Place of the family in L.D.S. doctrine and philosophy, together with application of basic religious principles to marriage and family relationships. A comparison of L.D.S. and non-L.D.S. families in time and space.
- ☐ **Nursing 288. Family Health and Home Nursing.** (1:1:0)
- ☐ **Psychology 321. Psychology of Adolescence.** (2:2:0)
- 322. Creative Experiences with Children.** (3:2:6) F.S.Su. (m) Prerequisite: H.D.F.R. 210 or equivalent. Larsen, Taylor, Staff
Designed to promote increased self-understanding, develop skills in working with children, and gain experiences in the use of creative play materials through participation in the human development laboratories. Lab fee \$4.50.
- 323. Organization and Planning for Preschool Programs.** (3:3:0) F.S.Su. (m) Prerequisite: H.D.F.R. 210. Taylor
Consideration of factors involved in the development of preschool programs. Study of essential procedures in preschool planning including housing, curriculum, equipment, guidance, health protection, and food service. Field trip.
- 324. Creative Play in Childhood.** (2:2:0) F.S. Prerequisite: H.D.F.R. 210. Valentine, Staff
Use of creative play materials in enriching a child's life. Meaning of play and its value in meeting needs of the growing child.
- ☐ **Education 325. Arts and Crafts for Early Childhood.** (2:2:1)
- ☐ **Education 340. Children's Literature.** (2:2:0)
- ☐ **Psychology 340. Mental Health.** (2:2:0)
- ☐ **Psychology 350 or Sociology 350. Social Psychology.** (3:3:0)
- 360. Achieving Success in Marriage.** (3:3:0) F.S.Su. (G-SS m) Cannon, Laws, Moss, Porter, Rollins, Staff
Consideration of maturity, love, compatibility, conflict, specific areas of adjustment in marriage, parent-child relationships, and effective management of family resources.
- 361. Family Relationships.** (3:3:0) F.S.Su. (G-SS m) Prerequisites: 6 hours in H.D.F.R., psychology, and sociology. Laws, Moss, Staff
Consideration of the interaction and interpersonal relations through the various stages of the family life cycle and the influence of the family on its members in developing values, goals, attitudes, and patterns of behavior.
- ☐ **Recreation 371. Planning for Family and Neighborhood Recreation.** (2:2:0)
- ☐ **Sociology 403. Marriage and the Family in American Society.** (2:2:0)
- 412. Principles of Child Guidance.** (3:3:0) F. (m) Prerequisite: H.D.F.R. 210. Jensen, Knowles
Application of knowledge and understanding of child behavior and psychodynamics of family interaction to guidance of children. Behavior and guidance principles are studied directly in the human development laboratories. Helpful to parents and prospective parents.
- 422. Methods and Teaching Experiences in the Human Development Laboratory.** (4:2:8) F.S. (m) Prerequisites: H.D.F.R. 323 and consent of instructor. Barlow
Experience in teaching and supervising a group of nursery school children. Students arrange with instructor to spend twelve hours a week in the nursery school laboratories. Lab fee \$9.00.

- 440. Family Life in the Middle and Later Years.** (2:2:0) S. Prerequisites: 4 hours in H.D.F.R., psychology, and sociology. Cannon

Adjustments in middle and later years revolving around physical, emotional, and social changes. Emphasis is placed upon needs that arise from changes in family relationships, living arrangements, and employment.

- ☐ **Psychology 445. Exceptional Children.** (2:2:0)

- ☐ **Psychology 450. Personality Development.** (3:3:0)

- 460. Marriage and Family Interaction.** (3:3:0) S. Prerequisites: 12 hours in H.D.F.R., psychology, and sociology (including H.D.F.R. 360 and Sociology 403). Cannon, Moss

An advanced appraisal of courtship, marriage relationships, and family interaction. A professional course designed primarily for majors in H.D.F.R. and related fields.

- 461. The Family and the Law.** (2:2:0) F. Nelson, Staff

Consideration of legal aspects of marriage and family life such as marriage statutes, property rights, separation and divorce, adoption, custody of children, wills, etc.

- 470. Community and Professional Responsibilities to Children and Families.** (2:2:0) F.S.Su. (m) Prerequisites: H.D.F.R. 210, 361; Sociol. 111. Moss, Porter

Acquaintance with resources of the community as they relate to the welfare of children and families. A consideration of the responsibilities of professional persons working with children and families.

- ☐ **492. Seminar in Theory and Concepts.** (2:2:0) S. Prerequisites: 10 hours in H.D.F.R. Cannon, Moss, Porter

Evaluation and integration of basic theories and concepts in H.D.F.R.

- ☐ **493. Survey of Research Study.** (2:2:0) F. Prerequisites: 10 hours in H.D.F.R. Cannon, Moss, Porter

Critical analysis and evaluation of all varieties of research studies in H.D.F.R.

- 510. Growth, Development and Behavior: Conception-Adolescence.** (3:3:0) F. Prerequisites: H.D.F.R. 210, 412 or 422. Knowles

An intensive study of principles of growth, development and behavior.

- 511. Growth, Development and Behavior: Adolescence-Adulthood.** (3:3:0) S. Prerequisites: H.D.F.R. 210 and 510. Knowles

Intensive survey of human development and behavior through adolescence and adulthood.

- 520. Workshop in Child Development.** (2:2:0) Su. Prerequisites: 8 hours in H.D.F.R. or permission of department chairman. Staff

Intensive study of application of principles of child development and child guidance.

- ☐ **Education 540. Statistical Methods.** (2:2:0)

- ☐ **Education 541. Advanced Statistics.** (2:2:0)

- ☐ **Psychology 550. Psychology of Personality.** (3:3:0)

- 560. Workshop in Family Relationships.** (2:2 wks., 8 hrs./day:0) Su. Prerequisites: 8 semester hours in H.D.F.R. and/or permission of department chairman. Staff

Intensive study of application of principles of human development and family relationships.

- ☐ **Sociology 560. Family and Kinships.** (2:2:0)

- 566. Materials and Procedures in Family Life Education.** (2:2:0) Su. Moss

An evaluation of materials, resources, and procedures in teaching family life education in the high school.

575. **Parent Education.** (2:2:0) S. Prerequisite: consent of instructor. Staff
Basic principles in organization of parent study programs. Formulation and presentation of program for parents.
580. **Introduction to Marriage and Family Counseling.** (2:2:0) F. Prerequisite: consent of instructor. Laws
Theories and techniques used in marriage and family counseling. Consideration of individual and group counseling as it pertains to the family.
590. **Readings in Human Development and Family Relationships.** (1-2:1-2:0) F.S.Su. Prerequisite: consent of instructor. Cannon, Knowles, Moss, Porter
Discussions and reports of current readings in this field. Open to students who have completed fifteen hours of courses in human development and family relationships.
595. **Special Topics in Human Development and Family Relationships.** (1-2:1-2:0) F.S.Su. Cannon, Knowles, Moss, Porter
Individual study for qualified students majoring in human development and family relationships upon consultation with the instructor and the chairman of the department.
596. **Research Problems and Methods in Human Development and Family Relationships.** (2:2:0) F. Cannon, Moss
Analysis of research methods used in human development and family relationships. Students have active experience in formulating a research project.
611. **Current Concepts and Research in Child Development.** (2:2:0) F. Porter, Rollins
660. **Family Patterns and Individual Development.** (2:2:0) S. Porter
661. **Dynamics of Family Interaction.** (2:2:0) S. Prerequisite: H.D.F.R. 360. Porter
663. **Critical Problems in Family Life.** (2:2:0) F. Prerequisite: H.D.F.R. 361. Cannon
664. **Current Concepts and Research in Family Relationships.** (2:2:0) F. Cannon, Moss, Porter, Rollins
667. **Problems of Teaching Marriage and Family Relationships in College.** (2:2:0) S. Cannon, Moss
685. **Developmental Use of Play Experiences.** (2:2:0) S. Prerequisite: consent of instructor. Staff
- 692, 693. **Seminar.** (2:2:0 ea.) F.S. Cannon, Moss, Porter
697. **Independent Research.** (1-3:1-3:0) F.S. Cannon, Moss, Porter
699. **Thesis for Master's Degree.** (1-6:1-4:0) Cannon, Moss, Porter
760. **Concepts and Theories of Marriage and the Family.** (3:3:0) F. Cannon, Moss
780. **Marriage and Family Counseling.** (2:2:0) S. Prerequisites: H.D.F.R. 580; Grad. Ed. 649; consent of instructor. Laws
781. **Case Analysis in Marriage Counseling.** (2:2:0) S. Prerequisite: H.D.F.R. 780. Laws
- 785, 786. **Internship in Marriage Counseling.** (3:1:6 ea.) F.S. Prerequisites: H.D.F.R. 780 and 781. Staff
792. **Seminar in Marriage Counseling.** (2:2:0) S. Staff
794. **Special Topics in Human Development.** (1-2:1-2:0) F.S.Su. Cannon, Knowles, Moss, Porter
795. **Special Topics in Family Relationships.** (1-2:1-2:0) F.S.Su. Cannon, Moss, Porter
797. **Doctoral Candidate Research.** (2-4:2-4:0) F.S.Su. Cannon, Knowles, Moss, Porter
799. **Dissertation for the Ph.D. Degree.** (Arr.) F.S.Su. Cannon, Knowles, Moss, Porter

Humanities

For information consult the dean of the College of Humanities and Social Sciences.



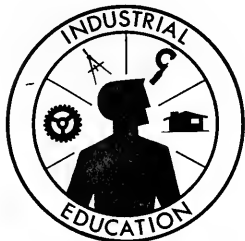
(An interdepartmental area only)

Course

101. An Introduction to the Humanities. (3:3:0) F.S.Su. (G-HA) Jacobs, Staff

Forms of creative expression as revealed in literature, painting, sculpture, architecture, and music. (One hour's credit from this class may be applied toward fulfilling the general education requirement in literature. The two remaining hours may be counted toward fulfilling the humanities requirement, but the student must also take work in a third department of those listed under humanities and aesthetics.)

Industrial Education



Professors: McArthur (chairman), Jeppsen (coordinator of technical and industrial education), Loveless, Snell.

Associate Professor: Hinckley.

Assistant Professors: Gamett, Holt, McKinnon.

Instructor: Jenkins.

Special Instructors: Allen, Naegle, Tolman.

The Industrial Education Department provides three different programs of instruction:

1. **The Industrial Education Program**, offering instruction toward the bachelor's degree in industrial education and the master's degree in industrial education. These programs are designed to prepare successful teachers and supervisors for state certification.
2. **The Technology Program**, offering instruction toward the bachelor's degree in building construction, design and drafting, and tool and manufacturing technology; the two-year technical certificate in these same fields and in welding.
3. **The General Service Courses**, open to all students. These courses offer basic training in fundamental operations and processes and are designed to give exploration, guidance, and consumer knowledge in crafts and in modern industrial fields.

The general objectives of these programs are to render maximum service to students in their preparation for good citizenship and community living and to better prepare them for a more successful and productive life.

REQUIREMENTS FOR THE INDUSTRIAL ARTS EDUCATION CERTIFICATE

Students planning to become teachers are encouraged to seek advisement early concerning the teacher education program. An attempt to complete one phase of the program ahead of schedule would complicate the smooth functioning of the program. Students beginning their professional preparation in the senior year may find it necessary to devote part of a fifth year to complete the program.

General Education Requirements

See "General Education Requirements" in the Student Academic Services section of this catalog. These requirements should be distributed throughout the four-year program.

Courses Fulfilling Minors

Courses fulfilling minors are designated in this department as follows: industrial arts minor—(iam), crafts minor—(cm), drawing minor—(dm), electronics minor—(em), metalwork minor—(mm), woodwork minor—(wm), farm mechanics minor—(fm).

Educational Requirements for Certification

See the requirements listed by the College of Education.

Note that Indus. Ed. 377 and 479 must be taken in the Industrial Education Department, not in the Department of Teacher Education.

Industrial Arts Teacher Education

Major—industrial arts.

Minor—crafts, drawing, electronics, farm mechanics, metal work, or wood-work.

(See listing in College of Education)

First Year			Third Year		
	F	S		F	S
Indus. Ed. 105, 100	2	3	Eng. Tech. 102	3	
Indus. Ed. 139, Dwg. 111	2	3	Indus. Ed. 360, 250	3	2
Indus. Ed. 120	2		Tchr. Ed. 301	2	
Math. 121	3		Indus. Ed. 375, 377	2	3
Eng. 111, 112	3	3	Gen. ed.		4
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Minor	5	6
Hist. 170		3	Relig.	2	2
Physics 105		3			
Gen. ed.	3		Total Hours	17	17
Relig. 121, 122	2	2			
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$			
Second Year			Fourth Year		
	F	S		F	S
Eng. Tech. 101		3	Indus. Ed. 479	8	
Indus. Ed. 130, 125	2	2	Health 362, Indus. Ed. 405	2	2
Indus. Ed. 200, Tchr. Ed. 200	3	0	Indus. Ed. 470, Tchr. Ed. 403	2	4
Drawing 211, Indus. Ed. 260	2	3	Grad. Ed. 550 or Indus. Ed. 540		2
Gen. ed.	6	5	Tchr. Ed. 310, Gen. ed.	2	2
Health 130, Art 110	2	2	Minor		5
Relig.	2	2	Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Tchr. Ed. 415	2	
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	18	17

Technical Teacher Education

Major—Technical Education

Minor—(Subject specialty)

This curriculum is designed to prepare advanced technicians as teachers for unit-shop type of programs in technical education. Entrance to this program requires the satisfactory completion of a two-year technical program approved by the department, together with a student G.P.A. rating of 2.25 or above. Graduation from this curriculum requires the satisfactory completion of the following:

	Minimum Semester Credit Hours
A. A prescribed two-year technical program approved by the department.	64
B. Selected and approved advanced technology courses in the specialty area.	12
C. General education and group requirements specified by the University for the baccalaureate degree.	28
D. Industrial education professional courses approved by the department	24
Total Hours	128

MASTER OF SCIENCE DEGREE IN INDUSTRIAL EDUCATION

Majors—industrial arts education or technical education.

Suggested minors—education and psychology, guidance and counseling, personnel and industrial relations, supervision and administration, business administration, or industrial management.

Major requirements: 18 to 22 semester hours selected from the following: Indus. Ed. 505, 510, 520, 525, 540, 594, 595, 690, 691; Grad. Ed. 550, 552, 560 or 658.

Minor requirements: 10 to 14 semester hours selected in consultation with adviser. See above list of suggested minors.

Research and Thesis: Grad. Ed. 660; Indus. Ed. 693, 694, 699.

Entrance Requirements: In addition to the requirements for the master's degree listed in the Graduate School section of this catalog, the Industrial Education Department requires:

- Satisfactory completion of 12 semester hours in industrial and technical education undergraduate courses prior to or concurrent with the graduate work or a minimum of 6 years of bona fide trade experience.
- Satisfactory completion of a qualifying examination given by the Industrial Education Department.

INDUSTRIAL TECHNOLOGY

Building Construction Technology

(Four-year technology degree)

First Year			Third Year		
	F	S		F	S
Indus. Ed. 100, 105	3	2	Indus. Ed. 301, 317	3	2
Indus. Ed. 139, 125	2	2	Civ. Eng. 211, Drawing		
Health 130	2		310	3	3
Math. 121, 122	3	3	Eng. Tech. 205, 206	3	3
Eng. 111, 112	3	3	Gen. ed.	4	3
Gen. ed.	2	4	Minor	3	5
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Relig.	2	2
Relig. 121, 122	2	2			
Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	18	18

Second Year			Fourth Year		
	F	S		F	S
Indus. Ed. 201, 218	3	2	Indus. Ed. 410, 411	3	3
Indus. Ed. 210, 211	3	2	Drawing 455, 355	2	3
Drawing 111, 156	3	2	Econ. 461	2	
Math. 223, Indus. Ed.			Acctg. 201		5
341	3	2	Bus. Mgt. 367		2
Physics 105, 106	3	3	Gen ed.	6	
Gen. ed.		3	Minor	3	3
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Relig.	2	2
Relig.	2	2			
Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	18	18

(For the two-year technical certificate program, see the Technical Institute section of this catalog.)

Design and Drafting Technology (Four-year technology degree)

First Year		Third Year			
	F	S	F	S	
Eng. Tech. 100, Indus. Ed. 130	1	2	Drawing 257, 311	2	3
Drawing 111, 211	3	2	Eng. Tech. 102, 228	3	2
Math. 121, 122	3	3	Indus. Ed. 335, 231	4	3
Eng. 111, 112	3	3	Gen. ed.	3	3
Health 130		2	Minor	3	3
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Phys. ed.	$\frac{1}{2}$	
Hist. 170	3		Relig.		2
Gen. ed		2	Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$
Relig. 121, 122	2	2			
Total Hours	15 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	16	16 $\frac{1}{2}$
		Fourth Year			

Second Year			Fourth Year		
	F	S		F	S
Drawing 156, 210	2	2	Drawing 410, 495*	3	3
Indus. Ed. 131, 325	3	2	Eng. Tech. 252, Drawing 455	2	3
Math. 223, Eng. Tech. 101	3	3	Minor	3	3
Physics 105, 106	3	3	Gen. ed.	6	6
Gen. ed.	2	2	Relig.	2	2
Minor		2	Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$
Phys. ed.		$\frac{1}{2}$	Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$
Relig.	2	2	*Bus. Mgt. 420 (alternate)		
Total Hours	15	16 $\frac{1}{2}$			

Recommended minors (14 hrs.): computer programming technology, tool and manufacturing technology, engineering technology, or mathematics.

(For the two-year technical certificate program, see the Technical Institute section of this catalog.)

Tool and Manufacturing Technology (Four-year Bachelor of Science Degree)

First Year			Third Year		
	F	S		F	S
Indus. Ed. 130, 131	2	3	Indus. Ed. 330, 332	3	2
Eng. Tech. 252	2		Indus. Ed. 331, 333	3	3
Drawing 111, 211	3	2	Eng. 216	2	
Math. 121, 122	3	3	Eng. Tech. 101	3	
Eng. 111, 112	3	3	Relig.	2	2
Relig. 121, 122	2	2	Eng. Tech. 216	4	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Gen. ed.		6
Health 130, Hist. 170 ..	2	3	Minor		5
Eng. Tech. 100		1			
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	17	18

Second Year			Fourth Year		
	F	S		F	S
Indus. Ed. 231, 230	3	3	Indus. Ed. 430, 432	3	2
Indus. Ed. 335, Statistics 221	4	3	Indus. Ed. 431	3	
Indus. Ed. 325, Math. 223	2	3	Gen. ed.	5	9
Physics 105, 106	3	3	Minor	4	5
Relig.	2	2	Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$			
Drawing 210, Econ. 101 ..	2	3	Total Hours	17	18
Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$			

(For the two-year technical certificate program in tool design technology, see the Technical Institute section of this catalog.)

Welding Technology

(For the two-year technical certificate program in welding technology, see the Technical Institute section of this catalog.)

INDUSTRIAL EDUCATION

Courses

99. **Shop Mathematics.** (0:2:0) S. Staff
100. **Woodwork Fundamentals.** (3:1:5) F.S. (iam, wm, fm) Hinckley, McKinnon
Care and use of hand and machine woodworking tools applied to fundamental principles of sawing, joining, fitting, and fastening.
105. **Wood Finishing.** (2:1:3) F.S. (iam, wm) Gamett
Preparation of surfaces for the application of finishes, stains, paints, varnishes, lacquers, polishes, etc. Use of brush and air gun.
119. **Upholstery I.** (2:1:3) F.S. (wm) Gamett
Typical forms of upholstery, including foundations with and without springs.
120. **Acetylene Welding I.** (2:1:3) F.S. (mm, fm) Long
Principles and practices in the fundamentals of oxyacetylene welding and cutting of steel. A general course open to all college students.
121. **Acetylene Welding Laboratory.** (3:0:9) F. Prerequisite: concurrent registration in Indus. Ed. 120. Long
Laboratory experience in oxyacetylene fusion welding, heating, brazing, and cutting of light gauge and plate steel.
125. **Electric Welding I.** (2:1:3) F.S. (mm, fm) Long
Principles and practices with electric welding equipment. Methods used in arc-welding of steel in flat position. A general course open to all college students.
126. **Electric Welding Laboratory.** (3:0:9) S. Prerequisite: concurrent registration in Indus. Ed. 125. Long
Laboratory experience in arc-welding of steel plate with emphasis on commonly used joints.
130. **Machine Tool Operation I.** (2:1:3) F.S. (mm, fm) Allen, Naegle
Theory and laboratory experience in metal cutting operations with engine lathe, drill press, and pedestal grinder, including use of fundamental hand, measuring and layout tools.
131. **Machine Tool Operation II.** (3:1:5) F.S. (mm) Prerequisite: Indus. Ed. 130. Allen, Naegle
Theory and practice involving engine lathe, milling machine, shaper, and surface grinder, including machine setup, work layout, clamping, gear cutting, indexing, speed and feed selection.
139. **Sheet Metal and Ornamental Iron.** (2:1:3) F.S. (iam, mm, fm) Gamett, McKinnon
Projects in sheet metal, ornamental iron work, and pattern layout.
160. **Recreational Handicrafts.** (2:1:3) F.S. (iam, cm) Evening registration only. McKinnon
Students may work in a selected area according to their interests—woodwork, metalwork, plastics, lapidary work, etc. Course is open to all students interested in leisure-time activities.
188. **Farm Machinery.** (3:1:5) F. (fm) Staff
Care and maintenance of general farm equipment.

- 189. Gas and Diesel Engines.** (3:1:5) F. S. (fm) Long
Care and maintenance of gas and diesel engines. Includes overhaul and rebuilding procedures.
- 196, 197. Shop Problems.** (2:3:0 ea.) F.S. Staff
Basic mathematical formulas and procedures used in solving practical problems in mechanical and industrial work, including application of principles of algebra, geometry, and trigonometry.
- 200. Woodwork Projects.** (3:1:5) F.S. (wm) Prerequisite: Indus. Ed. 100.
Hinckley, McKinnon
Use of hand and machine tools in the construction of furniture. Drawings, specifications, and cost estimates of all projects are submitted by the student.
- 201. Cabinet Construction.** (3:1:5) F. (wm) Prerequisite: Indus. Ed. 200.
Hinckley, McKinnon
Design and construction of cabinets used in residential structures.
- 210. Carpentry Framing.** (3:1:5) F. (wm, fm) Prerequisite: Indus. Ed. 100.
Hinckley, McKinnon
Practical problems in forming, framing, sheathing, and insulation.
- 211. Carpentry Finishing.** (2:1:3) S. (wm) Prerequisite: Indus. Ed. 210.
Hinckley, McKinnon
Practical problems in interior and exterior trim.
- 218. Plumbing.** (2:1:3) S. (fm) (Offered alternate odd years) McKinnon
Plumbing and plumbing layout.
- 221. Acetylene Welding II.** (5:2:8) F. Prerequisite: Indus. Ed. 121. Long
Advanced practices in all phases of oxyacetylene welding, including ferrous and nonferrous metals.
- 222. Welding Construction.** (3:1:5) S. Prerequisites: Indus. Ed. 121, 126. Long
Methods of layout, forming, cutting, and joining steel and alloy plates and shapes as applied to structures and machinery construction.
- 226. Electric Welding II.** (5:2:8) S. Prerequisite: Indus. Ed. 126. Long
Principles and practices in position welding of commonly used joints with some work in hard facing, stainless steel, and nickel alloys.
- 227. Inert-Gas Welding.** (3:1:5) S. Prerequisites: Indus. Ed. 121, 126. Long
Principles and practices of inert-gas (heliarc) welding of ferrous and nonferrous metals.
- 230. Machine Tool Performance.** (3:2:3) S. Prerequisites: Indus. Ed. 131, Drawing 210. Allen, Naegle
Investigation of basic and special machine tools, including study of cutting tool forces, speeds, feeds, horsepower, coolants, vibration, tool geometry, and tool materials.
- 231. Manufacturing Processes and Materials.** (3:2:3) F.S. Allen, Naegle
Economic and technical studies of manufacturing processes including casting, drawing, extruding, forming, metal cutting, and powder metallurgy with study and testing of new manufacturing materials.
- 240. Electricity Fundamentals.** (3:4:2) F.S. (iam, em) Holt
Fundamentals of electricity, including D.C. and A.C. motors and generators.
- 250. Graphic Arts.** (2:1:3) F.S. (cm) Jenkins
Fundamentals of printing industry such as typesetting, bookbinding, etc.
- 260. Crafts.** (3:1:5) S. (cm) Gamett, McKinnon
Fundamental hand and machine operation used in working plastics, wood, and leather.

- 301. Mill Work.** (3:1:5) F. (wm) Prerequisite: Indus. Ed. 200.
Advanced cabinet work and milling operations. Hinckley, McKinnon
- 317. Masonry.** (2:1:3) S. (fm) (offered alternate even years) McKinnon
Practice in laying cinder or concrete block walls.
- 319. Upholstery II.** (2:1:3) F.S. Prerequisite: Indus. Ed. 119. Gamett
Advanced work in upholstery.
- 325. Welding Processes.** (2:1:3) F. (mm) Long
A general course dealing with theory, application, and economics of various welding processes. Includes study of resistance, arc, thermite, gas, forge, and high energy beam welding processes, as well as brazing, cutting, and metallizing processes.
- 330. Mechanisms.** (3:3:0) F. Prerequisites: Drawing 210; Physics 105. Naegle
Graphical solution of problems involving displacement, velocity, and acceleration in tool and machine mechanisms, including study of linkages, gear trains, cams, and power transmission devices.
- 331. Manufacturing Analysis.** (3:2:3) F. Prerequisites: Indus. Ed. 230, 231, 335. Allen, Naegle
Includes product design analysis, manufacturing process analysis and selection, machine tool cost and function analysis, and determination of production and tooling costs.
- 332. Production Planning.** (2:2:0) S. Prerequisite: Indus. Ed. 331. Allen, Naegle
Planning for directing and coordinating manufacturing facilities toward production goals. Includes study of materials, methods, motion and time study, estimating, scheduling, plant layout, incentives, and safety.
- 333. Metrology.** (3:2:3) S. Prerequisite: Indus. Ed. 231. Allen, Naegle
Theory and application of precision tools and instruments for measuring length, angle, flatness, finish, shape, and soundness, including tool selection and use for in-process gaging.
- 335. Physical Metallurgy.** (4:3:3) F. Allen
Ferrous and nonferrous alloys, emphasizing heat treating characteristics, physical properties, and practical applications. Laboratory experiments include physical testing, micro-examination, carburizing, hardening, tempering.
- 337. Pattern Making and Foundry Practice.** (2:1:3) S. Prerequisite: Indus. Ed. 100. Hinckley
Principles of pattern making involving use of wood, plastic and plaster patterns, and metal castings.
- 341. House Wiring.** (2:2:2) F.S. (fm) McArthur
Electrical circuits in homes and farm buildings.
- 351. Typographic Layout and Design.** (3:2:4) F.S. Prerequisite: Indus. Ed. 250. Jenkins
Principles of design applied to products of the printer. Arrangement and paste-up of art materials for reproduction. A study of ink, paper, and theory of color.
- 360. Metal Crafts and Lapidary.** (3:1:5) F. (cm) Gamett, McKinnon
Projects in metals, lapidary, and enameling.
- 375. Organization and Development of Instructional Materials.** (2:2:0) F.S. Prerequisite: completion of or concurrent registration in Tchr. Ed. 301. Loveless
Organization and development of instructional materials to be used in industrial education classes, based on the principles and objectives of industrial education.

- 377. Secondary Teaching Procedures.** (3:3:3) F.S. Prerequisite: Indus. Ed. 375.
 Methods, techniques, and special classroom procedures applied to individual and group instruction in industrial education. Jeppsen
- 405. Shop Maintenance.** (2:1:3) F.S. Gamett
 Care and maintenance of tools and machines.
- 410. Construction Materials and Methods.** (3:3:0) F. (offered alternate even years) Hinckley, McKinnon
 Theoretical aspects of buildings, locations, soil conditions, footings, materials, and equipment.
- 411. Estimating.** (3:3:0) S. (offered alternate odd years) Staff
 Interpreting plans and specifications. Methods of estimating and figuring costs of materials and labor.
- 430. Automation.** (3:2:3) F. Prerequisites: Eng. Tech. 101, 252; Physics 106. Allen, Naegle
 Study, evaluation, and programming of machines and equipment to perform and control automatically machining, inspecting, and material handling operations by means of electronic, pneumatic and hydraulic devices.
- 431. Tool Design.** (3:2:4) F. Prerequisites: Indus. Ed. 330, 331; or concurrent registration. Allen, Naegle
 Design of jigs, fixtures, gages, cutting tools, and dies. Includes study of press design, cutting and forming pressures, feeding mechanisms, and safety features.
- 432. Manufacturing Research Laboratory.** (2:0:6) S. Prerequisites: Indus. Ed. 430, 431. Allen, Naegle
 Students select and conduct research in one or more of the following areas: machinability, automatic controls, tool design, quality control, materials handling, numerical control, or manufacturing process.
- 452. Graphic Arts II, Letterpress.** (5:3:6) F. Prerequisite: Indus. Ed. 250. Jenkins
 Advanced instruction and practice in principles of composition, presswork, block printing, rubber plates, and make-ready. Instruction in Ludlow composition, paper cutting, die-cutting, scoring, and perforating.
- 453. Graphic Arts III, Photolithography.** (5:3:6) S. Prerequisite: Indus. Ed. 250. Jenkins
 Advanced procedures in offset camera work, stripping procedures and surface platemaking for offset lithography. Emphasis on presswork, cold-type makeup and silk screen printing.
- 470. Shop Organization and Management.** (2:2:2) S. Prerequisite: completion of or concurrent registration in Indus. Ed. 377. Loveless
 Organization and management of industrial education shops, including unit, general, and multiple activity types.
- 479. Objectives and Practices in Teaching Industrial Arts.** (8:0:30) F.S. Gamett
 Student teaching. Material is prepared, and principles and objectives of the industrial arts program are formulated and discussed.
- 490. Special Problems in Metals.** (1-3:Arr.:Arr.) F.S.Su. Staff
- 491. Special Problems in Wood.** (1-3:Arr.:Arr.) F.S.Su. Staff
- 492. Special Problems in Electricity.** (1-3:Arr.:Arr.) F.S.Su. Staff
- 493. Special Problems in Crafts.** (1-3:Arr.:Arr.) F.S.Su. Staff
- 494. Special Problems in Graphic Arts.** (1-3:Arr.:Arr.) F.S.Su. Staff

- 505. Industrial Arts for Elementary Teachers.** (2:2:0) F.Su. Staff
Nature and needs of teachers instructing industrial arts in the elementary schools with emphasis on content and procedures.
- 510. History and Trends in Industrial and Technical Education.** (2:2:0) F.Su. Loveless, McArthur
Historical developments of industrial and technical education programs from their early beginnings to the present time.
- 515. Principles and Objectives of Industrial and Technical Education.** (2:2:0) F.Su. McArthur
General philosophy, principles, and objectives of industrial arts, vocational education, and technical education programs.
- 520. Analysis in Industrial and Technical Education.** (2:2:0) F.Su. Prerequisite: Indus. Ed. 515 or approval of instructor. Loveless
- 525. Course Construction in Industrial and Technical Education.** (2:2:0) S.Su. Loveless
Prerequisite: Indus. Ed. 520 or approval of instructor.
Preparation and use of a course of study in industrial and technical fields based on an analysis of the occupation.
- 540. Industrial Occupational Information and Guidance.** (2:2:0) S.Su. Loveless, McArthur
- 594, 595. Problems in Industrial and Technical Education.** (1-3:1-3:3-6 ea.) F.S.Su. Staff
- 690, 691. Seminar.** (1:1:0 ea.) Su. Staff
Review of latest developments and research findings in the field of industrial and technical education.
- 693, 694. Reading and Conference.** (1-3:1-3:0 ea.) F.S.Su. Staff
- 699. Thesis for Master's Degree.** (Arr.) F.S.Su. Staff

DRAWING

Courses

- 109. Industrial Arts Design.** (1:1:1) F.S. Gamett
Fundamental elements and processes of design in industrial arts.
- 110. Mechanical Blueprint Reading.** (2:2:2) F.S. Staff
A fundamental course. Covers instruction necessary to understand the purposes and the relationships between specifications and drawings as used in industry.
- 111. Mechanical Drawing Fundamentals.** (3:1:5) F.S. Home Study also. Pre-requisite: Drawing 111 or approval of instructor. Tolman
Care and use of instruments; lettering, applied geometry, and orthographic projection.
- 156. Small-House Planning.** (2:1:3) F.S. Home Study also. Prerequisite: Drawing 111 or approval of instructor. Tolman
Small-house plans, elevations, sections, and details.
- 210. Descriptive Geometry.** (2:1:3) F. Prerequisite: Drawing 111. Loveless, Naegle
Principles relating to point, line, plane, cylinder, cone, and double curved surfaces, etc., with application to practical problems.
- 211. Advanced Mechanical Drawing.** (2:1:3) F.S. Prerequisite: Drawing 111 or approval of instructor. Staff
Workings, drawings, advanced dimensioning, reproduction methods, fasteners, gears, cams, jigs and fixtures.

- 256. Rendering and Perspectives.** (3:1:5) F.S. Prerequisite: Drawing 156. Snell, Tolman
Methods and procedures involved in rendering and drawing one-, two-, and three-point perspectives.
- 257. Topographical Drawing.** (2:1:3) F.S. Prerequisite: Drawing 111. Snell, Tolman
Topographical symbols, mapping, and plotting.
- 310. Utilities Layout.** (3:1:5) S. Prerequisite: Drawing 111, 156. (offered alternate odd years) Tolman
Intersections, developments, and triangulation; electrical symbols, lighting and service layouts; design and layout of piping systems.
- 311. Aeronautical Drafting.** (3:2:4) F.S. Prerequisites: Drawing 210, 211. Tolman
Familiarization of terms and principles of flight, production drawings, layouts, sheet metal, lofting, microfilm requirements, manuals, mill specs, checking and change procedure.
- 355. Residential Drafting.** (3:1:5) F.S. Prerequisite: Drawing 156. Snell, Tolman
Planning and designing residential structures.
- 356. Commercial Structure Drafting.** (3:1:5) F.S. Prerequisite: Drawing 355. Snell, Tolman
Students design and plan a small commercial building with complete working drawings.
- 410. Technical Illustration.** (3:1:5) F.S. Prerequisite: Drawing 211. Tolman
Illustrative sketching, lettering, axonometric construction, oblique perspectives, templates, shading, airbrush, graphs, and visuals.
- 449. Special Problems in Drafting.** (1-3:Arr.:Arr.) F.S.Su. Prerequisite: approval of instructor. Staff
- 455. Structural Fabrication Planning.** (2:1:3) S. Prerequisites: Math. 122, Drawing 211. Staff
- 495. Special Problems in Architectural Drawing.** (1-3:Arr.:Arr.) F.S.Su. Prerequisite: approval of instructor. Staff



Students at work in a modern shop under experienced instructors

Languages



Professors: Rogers (chairman, 326 McKay), V. L. Anderson, Cummings, de Jong, Hansen, Lee, Valentine, Watkins, Wilkins.

Associate Professors: Clark, Brown, Folsom, Gibson, Green.

Assistant Professors: C. D. Anderson, Ball, Kelling, Moon, Rosen, Slade, Smith, Smithson, Speidel.

Instructors: Baird, Gubler, Heudier, D. Jensen, Lysenko, Polevoy, Taylor.

Special Instructors: Jacobs, B. Jensen.

The study of a foreign language is a unique educational experience. It is a means by which the student can participate in the inner life of another people and share their culture. Through the study of a foreign language, the student also comes to learn his own language better. The poet and philosopher Goethe said, "He who knows no other language, knows not his own."

The objectives of the courses in the Department of Languages are as follows:

1. **General:** To teach the student to understand and to speak a language with facility and to develop skill in reading and writing. To provide a survey of foreign literatures and to acquaint the student with foreign cultures.
2. **Specific:** To prepare students for the teaching profession, government work at home and abroad, international trade, L.D.S. missions in foreign countries, and research leading to advanced degrees.

Language Requirement for Graduation. Beyond the general education requirements, all students graduating from B.Y.U. are required to complete an additional 9 semester hours; either (a) training equivalent to 12 semester hours of college credit in one foreign language, 3 of which may be counted as general education credit in humanities (hence a 9-hour addition); or (b) training equivalent to 9 semester hours of college credit in specified math, statistics, logic, and science courses.

Library and Laboratory Facilities. The department has good library facilities and a language laboratory permitting emphasis on the most modern language teaching techniques. The tape library contains some of the best dramatic and poetic works in the principal languages of the world.

Language Placement Examinations for High School Graduates. Students who have had high school language training may obtain advanced standing after taking a language placement examination.

Special Examination for Foreign Residence. Students who have had foreign residence may, with the consent of the department, obtain up to 16 hours of special foreign language credit. This may be done by successfully completing a more advanced course in the language and by passing an examination administered by the department. The credit is available upon payment of a special fee. Foreign students are not permitted to obtain credit in this way for their native language.

Major and Minor Requirements. In French, German, Spanish, Russian, Portuguese, and Latin the department offers programs leading to a departmental

major or minor with the Bachelor of Arts degree. The requirement for a major is 24 hours of credit beyond the second year. No more than nine of these 24 hours toward the major may be earned through home study courses. Classes which fulfill the requirements of the major field are listed under each separate language offering. The requirement for a teaching minor is 14 hours beyond the second year. The department reserves the right to specify certain courses to be used toward a minor in these foreign languages. Areas that generally serve as minors include a second foreign language, English, one of the other areas in the College of Humanities and Social Sciences, or one of the fine arts.

Prospective Graduate Students. Prospective graduate students are reminded that a second, and sometimes a third, language will be required of them in graduate school. It is advisable that work in at least one other language be started before the junior year. Students must follow specific steps in their progress toward a graduate degree. It is their responsibility to obtain these regulations from the department chairman and follow them. Graduate students who have the consent of the instructor may register for certain undergraduate courses.

Degrees Offered. The Department of Languages offers the Bachelor of Arts degree in French, German, Latin, Portuguese, Russian, and Spanish; the Master of Arts degree in French, German, Latin, Portuguese, and Spanish; and the Doctor of Philosophy degree in French, German, and Spanish.

CHINESE

Courses

- 101, 102. **First Year Chinese.** (4:4:2 ea.) F.S. (G-HA m) Staff
Designed for those who have had no Chinese.
201. **Intermediate Chinese Reading and Conversation.** (4:4:1) F. Prerequisite: Chinese 102. Staff
301. **Selected Readings.** (4:4:0) S. Prerequisite: Chinese 201 or consent of instructor. Staff
- 321, 322. **Chinese Composition and Conversation.** (3:3:0 ea.) F.S. Staff

FRENCH

The following 24 hours of course work beyond the second year are required for a major: French 321, 322, 326, 441, 442, 443, 444, 445, and one additional advanced French course or Linguistics 325.

For a teaching minor the following course work beyond the second year is required: French 311, 321, 322, 326, 440, 445.

Courses

- 95, 96. **Beginning French for Graduate Students.** (0:5:0 ea.) F.S.Su. Staff
Taught in evening school only.
- 101, 102. **First Year French.** (4:4:4 ea.) F.S.Su. (G-HA m) Staff
Designed for those who have had no French. Pronunciation, conversation, reading, fundamentals of grammar, and the building of a substantial vocabulary. Four hours weekly in laboratory and cultural activities.
201. **Intermediate French Reading and Conversation.** (4:4:1) F.S.Su. Home Study also. (m) Prerequisite: French 102, three years of French in high school, or consent of instructor. Staff
211. **Second Year Conversation.** (2:2:2) F.S. Prerequisite: French 102 or consent of instructor. Staff
301. **Introduction to French Literature.** (4:4:0) F.S.Su. Home Study also (m) Prerequisite: French 201 or consent of instructor. Staff
Extensive readings of intermediate and advanced edited texts.

311. **Third Year Conversation.** (2:2:1) F.S. Prerequisite: French 301 or consent instructor. Staff
- 321, 322. **French Composition and Conversation.** (3:3:0 ea.) F.S. Home Study also. Prerequisite: sixteen hours of French or equivalent. Staff
326. **French Phonetics and Pronunciation.** (2:2:0) F.S. Prerequisite: French 301. Brown, Staff
377. **Secondary Teaching Procedures.** (3:3:1) F.S. Prerequisites: Tchr. Ed. 301 and French 322 or equivalent as determined by adviser. Staff
429. **Introduction to Stylistic and Literary Analysis.** (3:3:0) F. Prerequisite: French 322 or its equivalent. Staff
440. **Historical Survey of French Literature.** (4:4:0) F.S. Prerequisite: French 301 or consent of instructor. Staff
For minors only.
- 441, 442. **Survey of French Literature and Culture I, Origins to 1800.** (3:3:0 ea.) F.S. Home Study also. (G-HA) Prerequisite: French 301 or consent of instructor Staff
General view of literary periods, movements, and social backgrounds with representative readings.
- 443, 444. **Survey of French Literature and Culture II, 1800 to Present.** (3:3:0 ea.) F.S. Home Study also. (G-HA) Prerequisite 301 or consent of instructor. Staff
General view of literary periods, movements, and social backgrounds with representative readings.
445. **Introduction to French Civilization.** (2:2:0) F.S.Su. Staff
451. **Survey of French Literature and Culture in the Americas.** (2:2:0) Su. Prerequisite: French 301 or consent of instructor. Staff
Origins to present time; Canada, United States, Central and South America.
- 490, 491. **Individual Study in French.** (1-3:Arr.:Arr. ea.) F.S.Su. Staff
Assignments are made to fit the individual needs of the advanced student.
492. **French Readings (Honors).** (1-2:1-2:0) F.S.Su. Prerequisite: French 301 or good reading knowledge of French. Staff
520. **French Composition and Grammar.** (2:2:1) F.S.Su. Staff
521. **Romance Philology.** (2:2:0) F. (Offered 1964-65 and alternate years.) Clark
522. **History of French Language.** (2:2:0) S. (Offered 1964-65 and alternate years.) Clark
601. **Bibliography and Research Techniques.** (2:2:0) TBA Staff
621. **Stylistics.** (2:2:0) TBA Smithson
Intensive linguistic and literary analysis of French, especially from modern writers: syntax, translation, advanced stylistic analysis and advanced explication de textes.
660. **Old French Literature.** (3:3:0) S. (Offered 1965-66 and alternate years.) Clark
665. **French Literature of the Renaissance.** (2:2:0) F. (Offered 1965-66 and alternate years.) Clark, Slade
670. **French Literature of the 17th Century.** (2:2:0) S. (Offered 1964-65 and alternate years.) Brown
675. **French Literature of the 18th Century.** (2:2:0) F. (Offered 1965-66 and alternate years.) Clark, Staff

680. French Literature of the 19th Century. (3:3:0) S. Lee, Smithson
685. French Literature of the 20th Century. (2:2:0) F. (Offered 1965-66 and alternate years) Ball, Lee
- 690, 691. Directed Readings. (1-2:Arr.:Arr. ea.) F.S.Su. Prerequisite: consent of instructor. Staff
Individual study on a graduate level, to fit the needs of the graduate student.
- 692, 693. Seminar in Philology. (1-2:1-3:0 ea.) F.S.Su. Staff
- 694, 695. Seminar in French Literature. (2:2:0 ea.) F.S.Su. Staff
699. Thesis for Master's Degree. (1-6:Arr.:0) F.S.Su. Staff
721. Romance Dialects. (3:3:0) F. Clark
723. Old French Phonology and Morphology. (2:2:0) S. Clark
741. History of French Poetry. (2:2:0) TBA Ball, Brown, Clark, Lee
742. History of French Drama. (2:2:0) TBA Ball, Brown, Clark, Lee
744. History of French Novel. (2:2:0) TBA Ball, Brown, Clark, Lee
747. French Literary Criticism. (2:2:0) TBA Staff
761. Medieval Narrative and Lyric Poetry. (2:2:0) TBA Clark, Slade
771. Racine, Corneille. (2:2:0) TBA Brown
774. Moliere. (2:2:0) TBA Brown
776. Montesquieu, Voltaire, Rousseau. (2:2:0) TBA Clark, Staff
781. French Drama of the 19th Century. (2:2:0) TBA Lee, Smithson
782. French Novel of the 19th Century, I. (2:2:0) TBA Smithson
783. French Novel of the 19th Century, II. (2:2:0) S. Lee, Smithson
786. Modern French Drama. (2:2:0) TBA Lee
787. Modern French Novel, I. (2:2:0) TBA Lee
788. Modern French Novel, II. (2:2:0) S. Ball, Lee
- 790, 791. Directed Readings. (1-2:Arr.:0 ea.) Prerequisite: consent of instructor and chairman of committee. F.S.Su. Staff
- 792, 793. Seminar in Philology. (2:2:0 ea.) S.Su. Staff
- 794A,B. Seminar in Literature. (2:2:0 ea.) S.Su. Staff
799. Dissertation for the Ph.D. Degree. (1-6:Arr.:0) TBA Staff

GERMAN

The requirement for the major is 24 hours as follows: German 321, 322, 326, 429 or 441, 442, 443, 444, 445 or 490, and one of the following: Linguistics 325, German 429, 441, 445, 490. Recommended for those planning graduate study: German 441 and 490. The following courses are required for a teaching minor: 321, 322, 326, 442 or 444, 445. German 326 and German 377 are required for a graduate teaching assistantship in German.

Courses

- 95, 96. Beginning German for Graduate Students. (0:5:0 ea.) F.S.Su. Evening School only. Staff

- 101, 102. **First Year German.** (4:4:4 ea.) F.S.Su. (G-HA m) Staff
Designed for those who have not had German. Pronunciation, reading, fundamentals of grammar. Special emphasis on conversation and the building of a substantial vocabulary.
201. **Intermediate German Reading and Conversation.** (4:4:1) F.S.Su. Home Study also. (m) Prerequisite: German 102 or three units of German in high school or consent of instructor. Staff
Conversation, review of grammar, vocabulary building.
211. **Second Year Conversation.** (2:2:1) F.S. Prerequisite: German 102 or consent of instructor. Staff
301. **Introduction to German Literature.** (4:4:0) F.S.Su. Home Study also. (m) Prerequisite: 201 or equivalent. Staff
Extensive readings from the literatures of the language, using graded texts. An introduction to basic literary concepts.
311. **Third Year Conversation.** (2:2:1) F.S. Prerequisite: German 301 or consent of instructor. Staff
- 315, 316. **Scientific German.** (3:3:0 ea.) F.S.Su. Home Study also. Prerequisite: one year of college German or equivalent. Staff
- 321, 322. **German Composition and Conversation.** (3:3:0 ea.) F.S. Home Study also. Prerequisite: sixteen hours of German or equivalent. Staff
326. **German Phonetics and Pronunciation.** (2:2:1) F.S. Prerequisite: German 301. Folsom, Staff
377. **Secondary Teaching Procedures.** (3:3:1) F.S. Prerequisite: Tchr. Ed. 301 and German 322 or equivalent. Taylor, Staff
Skills mastery, hearing, speaking, reading, writing and identification of teacher-pupil activities required for conceptual learning. Lectures, demonstrations, and application of linguistic techniques to practical classroom requirements.
429. **The Structure of German.** (3:3:0) S. Prerequisite: Linguistics 325 and consent of instructor. Folsom
441. **German Literature from the Beginning to 1700.** (3:3:0) F. (G-HA) Prerequisite: German 301 or equivalent. Folsom, Watkins
442. **German Literature in the 18th Century.** (3:3:0) S. (G-HA) Prerequisite: German 301 or equivalent. Kelling, Rogers
443. **German Literature in the 19th Century.** (3:3:0) F. Home Study also. (G-HA) Prerequisite: German 301 or equivalent. Anderson, Speidel
444. **German Literature in the 20th Century.** (3:3:0) S. Home Study also. (G-HA) Prerequisite: German 301 or equivalent. Anderson, Smith
445. **Cultural History of Germany.** (3:3:0) F.S. Watkins, Staff
479. **Secondary Student Teaching.** (4-8:0:20-40) F.S. Prerequisites: Tchr. Ed. 301, German 321 and 377. Taylor, Staff
- 490, 491. **Individual Study in German.** (1-3:Arr.:Arr. ea.) F.S.Su. Staff
Assignments are made to fit the individual needs of the advanced student.
492. **German Readings (Honors).** (1-2:1-2:0) Prerequisite: German 301 or good reading knowledge of German. Staff
495. **Senior Seminar for Majors.** (2:2:0) F.S. Prerequisite: At least 6 hours of German literature. Smith, Staff
520. **Advanced German Composition and Grammar.** (2:2:0) S.Su. Staff

522. **History of the German Language.** (2:2:0) S. Prerequisite: three years of college German or its equivalent. Staff
601. **Bibliography and Research Techniques.** (2:2:0) F. Smith
622. **Gothic.** (3:3:0) F. (Offered 1965-66 and alternate years) Watkins
623. **Old High German and Old Saxon.** (3:3:0) S. (Offered 1965-66 and alternate years) Folsom, Watkins
- 628, 629. **Middle High German I, II.** (3:3:0 ea.) F.S. Folsom, Watkins
681. **German Romanticism.** (2:2:0) (Offered 1964-65 and alternate years) Speidel
683. **German Realism.** (2:2:0) (Offered 1964-65 and alternate years) Staff
- 690, 691. **Directed Readings.** (2:Arr.:0 ea.) F.S.Su. Staff
- 692, 693. **Seminar in Philology.** (2:2:0 ea.) S.Su. Staff
- 694, 695. **Seminar in Literature.** (2:2:0 ea.) F.S.Su. Staff
699. **Thesis for Master's Degree.** (1-6:Arr.) TBA Staff
741. **German Lyric Poetry.** (2:2:0) F. Anderson, Rogers
742. **The German Drama to 1880.** (2:2:0) F. (Offered 1965-66 and alternate years) Rogers
743. **The German Drama from 1880 to Present.** (2:2:0) S. (Offered 1965-66 and alternate years) Anderson
744. **The German Novel to 1880.** (2:2:0) F. (Offered 1964-65 and alternate years) Speidel
745. **The German Novel from 1880 to Present.** (2:2:0) S. (Offered 1964-65 and alternate years) Speidel
746. **The German Short Story.** (2:2:0) S. Anderson
776. **Lessing.** (2:2:0) F. Rogers
777. **Schiller.** (2:2:0) S. Smith
778. **Goethe.** (2:2:0) F. Kelling
- 790, 791. **Directed Readings.** (1-2:Arr.:0 ea.) F.S.Su. Staff
- 792, 793. **Seminar in Philology.** (2:2:0 ea.) S.Su. Staff
- 794A,B. **Seminar in Literature.** (2:2:0 ea.) S.Su. Staff
799. **Dissertation for the Ph.D. Degree.** (1-6:Arr.:Arr.) TBA Staff

GREEK

For major and minor requirements consult the department chairman.

Courses

- 101, 102. **Elementary Greek.** (4:4:0 ea.) F.S. (G-HA m) Staff
201. **Intermediate Greek Reading and Composition.** (4:4:1) F. (G-HA m) Staff
301. **Introduction to Greek Literature.** (4:4:0) S. (G-HA m) Prerequisite: Greek 201 or consent of instructor. Staff

HEBREW

Courses

- 101, 102. **First Year Hebrew.** (4:4:0 ea.) F.S. Rasmussen
A beginning course in the classical Hebrew of the Old Testament. Valuable for students and teachers as a tool for interpreting and appreciating the Bible.

201. **Second Year Hebrew.** (4:4:0) F. Prerequisite: Hebrew 101, 102 or equivalent acquaintance with Hebrew. Rasmussen
301. **Selected Readings.** (4:4:0) S. Prerequisite: 101, 102, 201 or equivalent acquaintance with Hebrew. Rasmussen

ITALIAN

Courses

- 101, 102. **First Year Italian.** (4:4:1 ea.) F.S. (G-HA m) Gibson
Special attention to accurate pronunciation for benefit of students of music and art for whom Italian has special interest and value. Grammar and graded reading.
201. **Intermediate Italian Reading and Conversation.** (4:4:0) F. Home Study also. Prerequisite: Italian 102 or two units of Italian in high school. Gibson
301. **Introduction to Italian Literature.** (4:4:0) S. Gibson
Extensive reading of intermediate texts.
- 431, 432. **Masterpieces of Italian Literature.** (3:3:0 ea.) F.S. Home Study also. (G-HA) Prerequisite: Italian 301 or consent of instructor. Gibson
- 490, 491. **Individual Study in Italian.** (1-3: Arr.:Arr. ea.) F.S. Gibson
Assignments made to fit the individual needs of the advanced student.

JAPANESE

Courses

- 101, 102. **First Year Japanese.** (4:4:1 ea.) F.S. (G-HA m) Staff
Constant study of the writing systems. Fundamentals of grammar and the building of a substantial vocabulary. Easy conversation and composition throughout.
201. **Intermediate Japanese Reading and Conversation.** (3:3:0) F. (m) Prerequisite: Japanese 102 or consent of instructor. Staff
301. **Introduction to Japanese Literature.** (4:4:0) S. (m) Prerequisite: Japanese 201 or equivalent. Staff
- 321, 322. **Japanese Composition and Conversation.** (3:3:Arr. ea.) F.S. Prerequisite: Japanese 301 or consent of instructor. Hyer
- 490, 491. **Individual Study in Japanese.** (1-3:Arr.:Arr. ea.) F.S.Su. Staff
Assignments made to fit the individual needs of the advanced student.

LATIN

The requirement for a major is 24 hours of upper division courses which must include Latin 441, 442, and 12 hours of electives to be selected from 301, 315, 316, 321, 322, 377, 431, 432, 490, 491.

The requirement for a teaching minor is 14 hours of upper division courses including Latin 441, 442, and 4 hours of electives from 301, 315, 316, 321, 322, 377, 431, 432, 490, 491.

Courses

- 101, 102. **First Year Latin.** (4:4:0 ea.) F.S.Su. (G-HA m) Clark, Staff
Designed for those who have not had Latin. Mastery of pronunciation, declensions, and conjugations. Correlation of Latin originals with English derivatives. Graded reading. Characteristics of Roman civilization.
- 111, 112. **Beginning Latin—Accelerated.** (4:4:0 ea.) F.S. Staff
201. **Second Year Latin.** (4:4:0) F.Su. Home Study also. (m) Prerequisite: Latin 102 or three units of Latin in high school. Clark, Staff
Readings from Caesar, Livy, etc. with a review and continuation of grammar.

301. **Introduction to Latin Literature.** (4:4:0) S.Su. Home Study also. (m) Pre-requisite: Latin 201. Clark, Staff
315. **Prelegal Latin.** (2:2:0) F. Prerequisite: consent of instructor. Clark, Staff
Recommended for prelegal students.
316. **Premedical Latin and Greek.** (3:2:0) S. Prerequisite: consent of instructor. Clark, Staff
- 321, 322. **Latin Grammar Review and Composition.** (3:3:0 ea.) F.S. Prerequisite: Latin 301 or 112 or equivalent. Staff
377. **Secondary Teaching Procedures.** (3:3:1) F.S.Su. Prerequisites: Tchr. Ed. 301 and Latin 322 or equivalent. Staff
Skills mastery, hearing, speaking, reading, writing and identification of teacher-pupil activities required for conceptual learning. Lectures, demonstrations, and application of linguistic techniques to practical classroom requirements.
- 431, 432. **Masterpieces of Latin Literature.** (3:3:0 ea.) F.S. Prerequisite: Latin 301 or 112 or equivalent or consent of instructor. Clark
- 441, 442. **Survey of Latin Literature and Culture.** (3:3:0 ea.) F.S. (G-HA) Clark, Staff
- 490, 491. **Individual Study in Latin.** (1-3:Arr.:Arr. ea.) F.S.Su. Clark, Staff
520. **Advanced Composition and Grammar.** (2:2:0) S. Prerequisite: Latin 322 or equivalent. Clark Staff
- 561, 562. **Elementary and Advanced Medieval Latin.** (2:2:0 ea.) F.S. Prerequisite: Latin 301 or 112 or equivalent. Clark, Staff
661. **Cicero.** (3:3:0) F. Clark
671. **Virgil.** (3:3:0) S. Clark, Staff
675. **The Latin Poets.** (3:3:0) F. Clark, Staff
Horace, Ovid, Lucretius, etc.
679. **The Latin Dramatists.** (3:3:0) S. Clark, Staff
Plautus, Terence, etc.
- 681, 682. **The Latin Fathers.** (3:3:0 ea.) F.S. Prerequisite: consent of instructor. Nibley
- 690, 691. **Directed Readings.** (1-2:Arr.:Arr. ea.) F.S.Su. Clark, Staff
Individual study on a graduate level.
- 692, 693. **Seminar in Philology.** (2:2:0 ea.) F.S. Clark, Staff
- 694, 695. **Seminar in Literature.** (2:2:0 ea.) F.S. Clark, Staff
699. **Thesis for Master's Degree.** (1-6:Arr.:Arr.) F.S.Su. Staff

NORWEGIAN

Courses

- 101, 102. **First Year Norwegian.** (4:4:2 ea.) F.S. (G-HA) Watkins
Designed for those who have had no Norwegian.
201. **Intermediate Norwegian Reading and Conversation.** (4:4:1) (Offered 1964-65 and alternate years) Watkins
- 490, 491. **Individual Study in Norwegian.** (1-3:Arr.:Arr. ea.) F.S.Su. Watkins
Assignments are made to fit the individual needs of the advanced student.

PORTUGUESE

The requirement for a major is 24 hours of upper division courses which must include the following: Portuguese 321, 322, 431, 432, 490, 491 (or equivalents).

The requirement for a teaching minor is 14 hours of upper division courses, which must include Portuguese 321, 322, 431, and 432.

Courses

- 101, 102. **First Year Portuguese.** (4:4:1 ea.) F.S. (G-HA m) Staff
A beginning course. Pronunciation, conversation, reading, and fundamentals of grammar. Special attention to Portuguese as the language of Brazil.
201. **Intermediate Portuguese Reading and Conversation.** (4:4:0) F. Home Study also. (m) Prerequisite: Portuguese 102 or three units of Portuguese in high school. Staff
301. **Introduction to Portuguese Literature.** (4:4:0) S. Home Study also. (m) Prerequisite: Portuguese 201. Staff
Extensive readings of intermediate edited texts.
- 321, 322. **Portuguese Composition and Conversation.** (3:3:0 ea.) F.S. Prerequisites: Portuguese 301; 16 hours of Portuguese or the equivalent. de Jong
- 431, 432. **Masterpieces of Brazilian and Portuguese Literature.** (3:3:0 ea) F.S. Home Study also. (G-HA) Prerequisite: Portuguese 301 or consent of instructor. de Jong
- 490, 491. **Individual Study in Portuguese.** (1-3: Arr.: Arr. ea.) F.S.Su. de Jong
- 620, 621. **Portuguese Composition and Conversation.** (3:3:0 ea.) F.S. de Jong
641. **Introduction to Portuguese Literature.** (3:3:0) F.S. (G-HA) de Jong
642. **Contemporary Portuguese Literature.** (3:3:0) S. de Jong
650. **Introduction to Brazilian Literature.** (3:3:0) F.S. de Jong
651. **Contemporary Brazilian Literature.** (3:3:0) S. de Jong
690. **Directed Readings.** (1-2:0:Arr.) F.S.Su. Staff
692. **Seminar in Philology.** (2:2:0) F.S. de Jong
694. **Seminar in Literature.** (1-2:1-2:0) F.S. Staff
699. **Thesis for Master's Degree.** (1-6:Arr.:Arr.) F.S. Staff

RUSSIAN

Courses

- 101, 102. **First Year Russian Grammar and Composition.** (5:5:3 ea.) F.S.Su. (G-HA m) Gubler, Lysenko
201. **Intermediate Russian Reading and Conversation.** (5:5:3) F.S.Su. Home Study also. (m) Prerequisites: Russian 101 and 102 or equivalent. Gubler, Lysenko
Designed for those who have had Russian. Pronunciation and conversation.
211. **Second Year Conversation.** (2:2:2) F.S. Prerequisite: Russian 102 or consent of instructor. Gubler, Lysenko
301. **Introduction to Russian Literature.** (3:3:0) F.S.Su. Prerequisite: Russian 201 or consent of instructor. Gubler, Lysenko
- 311, 312. **Third Year Conversation.** (2:2:1 ea.) F.S. Prerequisite: Russian 301 or consent of instructor. Gubler, Lysenko
- 321, 322. **Russian Composition and Conversation.** (3:3:0 ea.) F.S. Prerequisite: Russian 301 or equivalent. Gubler, Lysenko
- 385, 386. **Scientific Russian.** (2:2:0 ea.) F.S. Prerequisites: Russian 101, 102 or equivalent. Gubler, Lysenko

- 441, 442. **Survey of Russian Literature to 1900.** (3:3:0 ea.) F.S. (G-HA) Pre-requisite: Russian 322 or equivalent. Gubler, Lysenko
- 443, 444. **Survey of Russian Literature of the 20th Century.** (3:3:0 ea.) F.S. Prerequisite: Russian 322. Gubler, Lysenko
445. **Cultural History of Russia.** (3:3:0) F.S. Prerequisite: Russian 301 or equivalent. Gubler, Lysenko
- 490, 491. **Individual Study in Russian.** (1-2: Arr.:Arr. ea.) F.S.Su. Gubler, Lysenko
- Assignments made to fit the needs of the advanced student.

SPANISH

The requirement of a major in Spanish is 24 hours of upper division courses beyond the second year, which must include Spanish 321, 322, 441, 451. The additional 12 hours are to be taken from other advanced Spanish offerings or Linguistics 325.

The requirement for a teaching minor is 14 hours of upper division courses beyond the second year as follows: Spanish 321, 322, 326, 441 or 451, 445.

Courses

- 95, 96. **Beginning Spanish for Graduate Students.** (0:5:0 ea.) F.S. Evening School only. Staff
- 101, 102. **First Year Spanish.** (4:4:4 ea.) F.S.Su. (G-HA m) Staff
An audio-lingual approach emphasizing pattern practice and common grammatical structures.
- 111, 112, 113, 114. **Intensive Conversational Spanish.** (4:24:12 ea.) F.S.Su. (G-HA) Wilkins, Staff
Intensive conversational Spanish. Memorization of dialogues. Spanish patterns of grammar and idiom with native informant. Available only through Missionary Language Institute.
201. **Intermediate Spanish Reading and Conversation.** (4:4:1) F.S.Su. Home Study also. (m) Prerequisite: Spanish 102 or three units of high school Spanish or consent of instructor. Staff
301. **Introduction to Spanish Literature.** (4:4:0) F.S.Su. Home Study also (m) Prerequisite: Spanish 201 or equivalent. Staff
311. **Third Year Conversation.** (2:2:1) F.S. Prerequisite: Spanish 301 or consent of instructor. Staff
- 321, 322. **Spanish Composition and Conversation.** (3:3:0 ea.) F.S.Su. Home Study also. Prerequisite: Spanish 301 or equivalent. Staff
326. **Spanish Phonetics and Pronunciation.** (2:2:0) F.S. Anderson
351. **Hispanic Civilizations.** (2:2:0) F.S.Su. (G-HA) Staff
377. **Secondary Teaching Procedures.** (3:3:1) (Education credit only) F.S. Prerequisites: Tchr. Ed. 301 and Spanish 322 or equivalent. Taylor, Staff
Skills mastery, hearing, speaking, reading, writing, and identification of teacher-pupil activities required for conceptual learning. Lectures, demonstrations and application of linguistic techniques to practical classroom requirements.
441. **Survey of Spanish Literature.** (3:3:0) F.S.Su. Home Study also. Prerequisite: Spanish 301 or consent of instructor. Anderson, Gibson, Hansen, Moon, Rosen, Valentine
445. **The Culture of the Hispanic World.** (3:3:0) F.S.Su. (Offered 1964-65 and alternate years) Prerequisite: Spanish 301 or consent of instructor. Staff

451. **Survey of Hispanic-American Literature.** (3:3:0) F.S.Su. Home Study also. Prerequisite: Spanish 301 or consent of instructor. Staff
454. **Hispanic-American Novel.** (3:3:0) F.S. Prerequisite: Spanish 301 or consent of instructor. Staff
458. **Hispanic-American Short Story.** (2:2:0) S. Prerequisite: Spanish 451 or consent of instructor. Staff
470. **The Narrative of the Golden Age.** (3:3:0) F.S. G-HA) Prerequisite: Spanish 301 or consent of instructor. Moon, Gibson
479. **Secondary Student Teaching.** (4-8:0:20-40) F.S. Prerequisites: Tchr. Ed. 301, Spanish 301 and 377. Taylor, Staff
480. **Nineteenth Century Spanish Drama and Poetry.** (3:3:0) F. Prerequisite: Spanish 441 or consent of instructor. Staff
481. **The Nineteenth Century Spanish Novel.** (3:3:0) S. Prerequisite: Spanish 441 or consent of instructor. Staff
485. **Introduction to Contemporary Spanish Literature.** (3:3:0) F. Gibson, Hansen, Anderson
492. **Spanish Readings (Honors).** (1-2:1-2:0) F.S.Su. Prerequisite: Spanish 301 or good reading knowledge of Spanish. Staff
520. **Advanced Spanish Composition and Grammar.** (2:2:0) F.S.Su. Staff
521. **Romance Philology.** (2:2:0) F. Clark
522. **History of the Spanish Language.** (2:2:0) S. Gibson
556. **Hispanic-American Poetry.** (2:2:0) F.S. Valentine
584. **Generation of '98.** (3:3:0) F.S. Anderson, Moon
601. **Bibliography and Research Techniques.** (2:2:0) F. Staff
653. **Hispanic-American Drama.** (2:2:0) F.S. Valentine
654. **Mexican Novel.** (2:2:0) F.S. Hansen, Valentine
655. **South American Novel.** (2:2:0) F.S. Hansen, Valentine
656. **The Modernista Movement.** (2:2:0) S. Valentine
657. **Hispanic-American Essay.** (2:2:0) F. Valentine
660. **Spanish Medieval Literature.** (2:2:0) F. Gibson
- 670, 671. **Golden Age Literature.** (3:3:0 ea.) F.S. Gibson, Hansen
- 685, 686. **Twentieth Century Literature.** (2:2:0 ea.) F.S. Anderson, Moon
- 690, 691. **Directed Readings.** (1-2: Arr.:Arr. ea.) F.S.Su. Prerequisite: consent of instructor. Staff
Individual study on a graduate level, to fit the needs of the graduate student.
692. **Seminar in Philology.** (2:2:0) Staff
- 694, 695. **Seminar in Spanish Literature.** (2:2:0 ea.) F.S.Su. Staff
699. **Thesis for Master's Degree.** (1-6:Arr.:0) F.S.Su. Staff
721. **Romance Dialects.** (3:3:0) F. Clark
741. **The Spanish Poetic Tradition.** (2:2:0) F. Staff
742. **The Development of Spanish Drama.** (2:2:0) S. Staff

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| 744. Spanish Novelistic Prose. (2:2:0) F. | Staff |
| 773. Cervantes. (2:2:0) S. | Staff |
| 774. Lope de Vega. (2:2:0) F. | Staff |
| 790, 791. Directed Readings. (1-2: Arr.:0 ea.) F.S. | Staff |
| 792, 793. Seminar in Philology. (2:2:0 ea.) F.S. | Staff |
| 794A,B. Seminar in Literature. (2:2:0 ea.) F.S. | Staff |
| 799. Dissertation for the Ph.D. Degree. (1-6:Arr.:Arr.) F.S.Su. | Staff |

LINGUISTICS

Courses

- 325. Introduction to Descriptive Linguistics.** (2:2:0) F.S.Su. Blair, Folsom
 An introduction to linguistics which includes an introduction to the scientific study of language for students in foreign languages, English, and anthropology. Includes the nature and description of language, its sounds and grammar, and the historical and comparative study of language.
- 326. Introduction to Historical and Comparative Linguistics.** (2:2:0) S. Blair, Folsom
 An introduction to the scientific study of language for students in foreign languages, English, and anthropology. Includes the historical and comparative study of language.
- 360. Practical Phonetics.** (2:2:0) F.S. de Jong
 Elementary principles of speech mechanics in their relation to correct diction.

SEMITICS

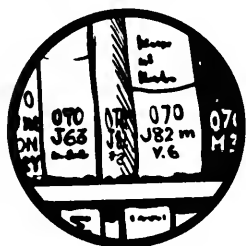
Hebrew, Arabic, Aramaic, Akkadian, Egyptian, Syriac, Ugaritic

For Semitic languages other than Hebrew see the Department of Graduate Studies in Religious Instruction section. The courses in Semitic language carry credit in religion and fulfill the language requirements for the B.A. degree.



At work in the language laboratory—a useful aid in studying languages

Library Science



Professor: Tyler.

Assistant

Professors: Knight (chairman, 532 JRCL), Nelson.

Instructors: Dees, Flake, Jenson, Lamson, Larsen, Nielson, Jensen, Schmidt, Smith.

The library science program is organized to fill the needs of school and public librarians, teachers, and students who wish to become familiar with library use and those who wish to do advanced study in a professional library school. All courses listed will be taught one or more times during a two-year period, including summer sessions.

Candidates for a librarian's certificate in Utah must have courses 355, 363, and 366 in addition to the elementary or secondary certificate.

A minor (teaching minor) requires 14 to 16 hours of selected courses including 355, 363, 366, 370, and 585 or 569.

Courses

- 111. Use of Books and Libraries.** (1:2:0 for $\frac{1}{2}$ term) F.S. (m) Staff
Efficient use of library materials; card catalog, use of general reference books (bibliographies, dictionaries, encyclopedias, and indexes); and making of bibliographies.

☐ **Teacher Education 340. Children's Literature.** (2:2:0)

- 355. Classification and Cataloging.** (3:3:0) S.Su. (m) Jenson, Nielson
Prerequisite: ability to typewrite.

Theory and principles of classification and cataloging of books in libraries. Practical problems and laboratory practice.

- 363. Library Organization and Administration.** (3:2:30 hrs. during the semester) F.Su. Home Study also. (m) Knight

General organization and administration in all types of libraries. Emphasis on physical facilities, objectives, and management. Thirty hours of practice work required.

- 366. Book Selection.** (3:3:0) S.Su. (m) Knight
Principles, criteria, and practice in selection of books and other library materials.

- 370. Introduction to Bibliography.** (3:3:0) F.S.Su. (m) Schmidt, Knight
Intensive study of the content and use of reference books: encyclopedias, dictionaries, indexes, yearbooks, bibliographies, atlases, and biographies. Bibliographical form stressed.

☐ **Teacher Education 406. Teaching Materials Laboratory (Audio-Visual Aids).** (2:2:1).

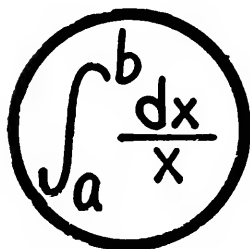
☐ **Speech 527. Storytelling.** (2:2:0).

569. **Reading Guidance for Young People.** (2:2:0) S. (m) Jensen
A critical study of the reading interests and needs of young people. Problems of the reluctant and the avid reader. Extensive examination, discussion and reading of books.
571. **Bibliography of the Sciences.** (2:2:0) Su. (m) Staff
572. **Bibliography of the Humanities.** (2:2:0) S.Su. (m) Knight
573. **Bibliography of the Social Sciences.** (2:2:0) S.Su. (m) Knight
- 580-584. **Workshop: Current and Special Problems.** (1-2:1-2 weeks: 40-50 hrs. per week ea.) Su. Staff
585. **History of Books and Libraries.** (2:2:0) S.Su. (m) Flake
- **Graduate Education 610. Development of Instructional Materials (Audio-Visual Aids).** (2:2:1).
650. **Current Problems in the Technical Services.** (2:2:0) Su. (m) Staff
- 695, 696. **Readings and Research in Library Science.** (1-2:Arr.:Arr. ea.) Staff



Open stacks and ample study area—a practical laboratory in library science

Mathematics



Professor: Robinson.

Associate Professors: Hillam (chairman, 46 T-15), Dean, Fearnley*, Olpin, Yearout.

Assistant Professors: Egbert, Gee*, Haupt, Jamison, Larsen*, Moore*, Wickes.

Instructors: Gill, Higgins*, Hone, Wight.

Special Instructor: Rencher.

The Mathematics Department offers courses leading toward the Bachelor of Science and Master of Science degrees in mathematics and a Master of Science degree in mathematics education.

Requirements for Bachelor of Science Degree

Mathematics Requirements: An undergraduate major in mathematics must present a program prepared in consultation with an adviser appointed by the department. In this program he is required to complete with a grade of "C" or better:

- (1) The courses: Math. 332, 334, 371, 541
- (2) A minimum of 12 additional hours selected with prior approval of the department, from the courses, Math. 311, 336, 372, 387, 411, 412, 435, 451, 542, 551, 552, 585.

A student who obtains a teaching certificate concurrently with his baccalaureate degree in mathematics may substitute two of the courses, Math. 300, 301, 302 for six of the twelve hours in requirement (2).

A student who plans to do graduate work in mathematics should realize the need for meeting more than the minimum requirements and should elect at least the courses Math. 372, 451, 542, 551 and 552.

In addition to the above listed courses each departmental major is required to pass a written comprehensive examination which is administered by the testing service about the middle of January during the senior year.

Language. The student is strongly urged to achieve competence in a foreign language (German, Russian, or French) during his undergraduate career. He may do this by enrolling in a beginning course during his sophomore year and following this up with additional course work or individual reading in the language. The availability of religion courses taught in a foreign language which count both towards the fulfillment of the religion requirement and the language requirement are particularly attractive in this respect. For example, Relig. 234-237, 301, 302, 451, 452 (foreign language sections) are some of these. Certain courses which do double duty in fulfilling both the language requirements for the B.A. degree and general education requirements are also available upon demand in other areas of the University.

Religion: It is suggested that the student take advantage of the opportunity to replace a two-hour religion course during his senior year by two hours of credit for devotional assembly.

Suggested Program: The following program is suggested to those who wish to major in mathematics. This program will result in a physics minor.

As an alternative, a minor in statistics can be obtained by electing statistics courses where so indicated. Recommended courses are Statistics 241, 321, 336, 421, 422, 522, 541.

Freshman Year					
	F	S		F	S
Math. 111, 112	5	5			
Eng.	3	3			
Chem. or Geol.	3				
Relig. 121, 122	2	2			
Health 130	2				
Hist. 170		3			
Electives (Statistics 241)	2	4			
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$			
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$			
Total Hours	18	18			

Junior Year					
	F	S		F	S
Math. 371, 372	3	3			
Math. 332	3				
Math. (Elective)		3			
Soc. sci.	3	3			
Relig.	2	2			
Physics (Statistics)	3	3			
Electives (Lang.)	4	4			
Total Hours	18	18			

Sophomore Year					
	F	S		F	S
Math. 213, 334	5	3			
Physics 211, 212	4	4			
Physics 213, 214	1	1			
Lang.	4	4			
Relig.	2	2			
Electives (Statistics 321)	1	3			
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$			
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$			
Total Hours	18	18			

Senior Year					
	F	S		F	S
Math. 541, 542	3	3			
Math. (Electives)	6	3			
Humanities (Lit.)	3	3			
Relig.		2			
Biol. sci.	3	3			
Electives (Statistics)	3	4			
Total Hours	18	18			

Mathematics Teaching: Students who wish to prepare to teach mathematics in the elementary or secondary schools should consult the listings in the Teacher Education Department for the requirements for degrees from the College of Education.

A student who wishes an academic major in mathematics but who also desires to obtain a teaching certificate should consult with the Mathematics Department office for an outlined course of study.

GRADUATE DEGREE REQUIREMENTS

Graduate students should acquaint themselves with the general requirements found in the Graduate School section of this catalog.

M.S. in Mathematics

Before being admitted on a degree-seeking basis, a student is required to present credit equivalent to the requirements for a B.S. degree in mathematics at Brigham Young University including 6 hours of advanced calculus. A candidate for the Master of Science degree in mathematics is required to complete a minimum of 18 semester hours in graduate mathematics and is also required to complete an acceptable thesis. The candidate's program must have prior approval from the department and be filed with the Graduate Dean no later than 30 days after the first registration as a degree-seeking student.

M.S.-3 Program for Secondary and Junior College Teachers

A student who intends to become a teacher in a secondary school or perhaps in a junior college may find it to his advantage to enter the M.S.-3 program. This is an accelerated program beginning in the junior year designed to enable a student to (1) obtain a B.S. degree in the College of Education with a teaching major in mathematics and a teaching minor in physics together with a Utah teaching certificate at the end of his senior year and (2) obtain the M.S. degree in mathematics education with an additional full year of study, including a thesis which may be expository.

The prerequisites for this program are the successful completion at a junior college or a university of a two-year program which includes calculus and

sophomore physics together with courses which will complete B.Y.U. General Education requirements.

A suggested curriculum for this program follows:

Junior Year			Senior Year		
	F	S		F	S
Math. 301 ¹ , 302 ¹	3	3	Tchr. Ed. 310	2	
Math. 300	3		Tchr. Ed. 415	2	
Elective (Math.) ²		3	Health 362	2	
Statistics 241		2	Phys. Sci. 479	8	
Physics 300		2	($\frac{1}{2}$ semester, all day)		
Tchr. Ed. 200, 301	3		Elective (Physics)		3
Phys. Sci. 377		3	(Upper div.)		
Physics 315, 316	5		Electives (Math.) ²		6
Relig.	2	2	Tchr. Ed. 403		4
			Relig.	2	2
Total Hours	16	15			
			Total Hours	16	15

Graduate Year			
	F	S	Su
Math. 371 ³ , 372 ³	3	3	
Math. 501, 502, 503	3	3	3
Grad. Math. Sequence ⁴	3	3	
Grad. Ed. 601, 636 ⁵	3	3	
Grad. Ed. 630, 639 ⁵	2	3	
Math. 699 (Thesis)			3
	14	15	6

Notes:

¹A student may be exempted from 301 by receiving an A or B grade in 371.

A student may be exempted from 302 by receiving an A or B grade in 451.

Note that if a student is exempted from either 301 or 302, additional course work must be taken from the elective list to make a total of 18 credit hours of upper division mathematics.

²Suggested undergraduate mathematics electives are Math. 311, 451, 371, 372, 387, 332, 334, 336.

³Students who have had Math. 371 or 372 in their undergraduate program should elect an additional graduate mathematics sequence. With special permission certain other undergraduate courses may be elected (e.g. Math. 451, 387, 332), provided they are not part of the undergraduate preparation.

⁴The graduate mathematics sequence(s) must be selected from the sequences 541, 542, 551, 552, or any 600 level sequence.

⁵A student who plans a junior college teaching career may, with approval, substitute the junior college oriented education courses 640 and 642 for the courses 636 and 639 respectively.

Undergraduate Minors

A student who wishes to minor in mathematics must complete with a grade of C or better, 9 hours of course work in those courses numbered above 300 which are designated by (m) in the descriptions which follow.

Courses

51. **Plane Geometry.** (0:3:0) F.Su. (Block Plan) Staff
 Equivalent to high school plane geometry which is required of students majoring in the College of Physical and Engineering Sciences. This is also offered by correspondence prior to entrance as a freshman.
97. **Mathematical Review.** (0:3:0) F.S.Su. Prerequisite: Math. 111. Staff
 An intensive review of mathematics through calculus, for returning missionaries and others. Offered on the block plan each block. Concurrent registration in a credit course is allowed.

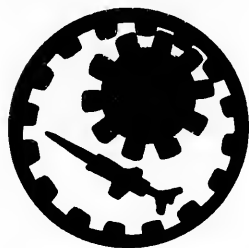
101. **Intermediate Algebra.** (3:1:4) F.S.Su. Home Study also. Prerequisites: 1 year of high school algebra and 1 year of plane geometry (or Math. 51). Staff
This course will provide students of varied mathematical background an opportunity to receive the necessary training required to continue in other mathematics and science courses. This course may NOT be used for credit in filling the mathematics, statistics, logic etc. requirement for the baccalaureate degrees.
105. **College Algebra.** (3:4:0) F.S.Su. Prerequisite: Math. 101. Staff
This course parallels the material of part of Math. 111 at a slower pace for students whose mathematical preparation indicates the need for more time.
106. **Trigonometry.** (3:3:0) F.S.Su. Prerequisite: Math. 105 and high school plane geometry. Staff
This course parallels material in Math. 111 but proceeds at a slower pace for students whose mathematical preparation indicates the need for more time.
111. **College Algebra and Trigonometry.** (5:5:0) F.S.Su. Home Study also. One and a half years of high school algebra and one year of plane geometry are the minimum prerequisites (or Math. 101). Students will be placed in Math. 101, 105 or 111 by screening procedures prior to registration. Staff
112. **Analytic Geometry and Calculus I.** (5:5:0) F.S.Su. Home Study also. Prerequisite: Math. 111 or its equivalent. Staff
Plane analytic geometry, differential and integral calculus with applications—an integrated course (Continued in 213).
- 121, 122. **Technical Mathematics.** (3:3:0 ea.) F.S. Prerequisite: Math. 101 or equivalent. Staff
For students in the technical institute. College algebra, trigonometry, analytical geometry, and an introduction to calculus. Emphasis on problems and practical application.
205. **Structure of Mathematics.** (3:3:0) F.S. Staff
For honors students who do not plan courses of study which require mathematical proficiency. A look at the structure and meaning of mathematics.
213. **Analytic Geometry and Calculus II.** (5:5:0) F.S.Su. Home Study also. (m) Prerequisite: Math 112. Staff
A continuation of an integrated course in plane and solid analytic geometry, and differential and integral calculus.
223. **Technical Mathematics.** (3:3:0) F.S. Prerequisite: Math. 112. Staff
A continuation of Math. 122. Analytical geometry and calculus for the technical institute.
- 291, 292. **Honors Seminar in Mathematics.** (1:1:0 ea.) Prerequisites: Must parallel Math 111 and 112. Staff
A special seminar in the structure of mathematics required of students in the University Honors Program majoring in mathematics, and open to other interested students.
300. **History of Mathematics.** (3:3:0) F.Su. Home Study also. Prerequisite: Math 112 or 205. Staff
The development of mathematics with emphasis on the underlying principles and motivations. For liberal arts students, honors students and prospective mathematics teachers.
301. **Foundations of Algebra.** (3:3:0) F.S.Su. (m) Prerequisite: Math 111. Staff
Sets, logic, basic number systems; required of prospective teachers.
302. **Foundations of Geometry.** (3:3:0) F.S.Su. (m) Prerequisite: Math. 112. Staff
A critical analysis of the logical structure and content of Euclidean geometry, based on Birkoff's metric postulates; and an introduction to non-Euclidean geometries; required of prospective secondary teachers.

- 305. Basic Concepts of Mathematics.** (3:3:0) F.S.Su. Staff
For elementary school teachers only. Designed to develop an understanding of the basic structure of mathematics. This course is a prerequisite for Tchr. Ed. 322 and is required of all elementary school teachers.
- 311. Digital Computers.** (3:1:6) F.S. (m) Prerequisite: Math. 112. Staff
Computer logic, flow diagram, coding techniques, solution of problems using a modern digital computer as a laboratory machine.
- 313. Advanced Engineering Mathematics.** (3:3:0) F.S.Su. (m) Prerequisite: Math. 213. Staff
Determinants and matrices, numerical analysis, vector analysis. (Not open to mathematics majors.)
- 314. Vector Analysis.** (3:3:0) (Offered on demand) (m) Prerequisite: Math. 213. Staff
Vector algebra, vector differential operators, integral theorems, introduction to potential theory. For students who desire greater depths than is possible in Math. 313 or 317.
- 317. Topics in Applied Mathematics.** (3:3:0) F.S. (m) Prerequisite: Math. 213. Staff
Matrices, determinants, vectors and vector analysis. Introduction to complex variables. Not open to mathematics majors.
- 332. Introduction to Complex Analysis.** (3:3:0) F.Su. (m) Prerequisite: Math. 213. Staff
Complex algebra, analytic functions, integration in the complex plane, infinite series, theory of residues, conformal mapping.
- 334. Introduction to Ordinary Differential Equations.** (3:3:0) F.S.Su. Home Study also. (m) Prerequisite: Math. 213. Staff
An introductory course in the theory of ordinary differential equations with applications, including the use of Laplace transformations.
- 336. Introduction to Partial Differential Equations.** (3:3:0) F.S. (m) Prerequisite: Math. 334. Staff
An introduction to the theory of partial differential equations, Fourier series, Bessel functions, Langedre polynomials with applications.
- 371. Introduction to Modern Algebra.** (3:3:0) F. (m) Prerequisite: Math. 213. Staff
An introduction to modern algebra, including the study of groups, rings, and fields.
- 372. Introduction to Linear Algebra.** (3:3:0) S. (m) Prerequisite: Math 213. Staff
An introduction to linear algebra, including the study of linear spaces, linear transformations, and matrices.
- 387. Theory of Numbers.** (3:3:0) F. (m) Prerequisite: Math. 213. Staff
Foundations of number theory, congruences, residues, reciprocity law, Diophantine equations.
- 411, 412. Numerical Analysis.** (3:3:0 ea.) F.S. (m) Prerequisite: Math. 334. Staff
Numerical methods for solving algebraic simultaneous, difference, differential and integral equations. Emphasis placed upon techniques for use on high-speed computers. The second semester is independent of the first and each may be taken separately.
- 435. Intermediate Differential Equations.** (3:3:0) S. (m) Prerequisite: Math 334. Staff
Intermediate theory of ordinary differential equations including solutions of special types of equations, existence theorems, series solutions, hypergeometric functions.

451. **Modern Geometry.** (3:3:0) F. (m) Prerequisite: Math 371 or 387. Staff
Synthetic and analytic projective geometry including relationships with affine and Euclidean geometry. Geometry considered as the study of invariants of groups of transformations.
- 491, 492. **Senior Seminar in Mathematics.** (1:1:0 ea.) F.S. Prerequisite: Senior standing in mathematics. Staff
A seminar for honors majors in mathematics.
495. **Special Readings in Mathematics.** (1-2:0:1-3) (Offered on demand) (m) Prerequisite: consent of instructor. Staff
Special directed reading in work beyond the scope of usual undergraduate courses. Topics to be selected to meet the need and interest of the student.
- 501, 502. **Foundations of Mathematical Thought.** (3:3:0 ea.) F.S. Staff
503. **Mathematics for Secondary School Teachers.** (3:3:0) (Offered on demand) Su. Prerequisite: teaching experience or consent of instructor. Staff
- 513A,B,C,D. **Advanced Topics in Applied Mathematics.** (3:3:0 ea.) (Offered on demand) (m) Prerequisite: Math. 313 or 317 or equivalent and consent of instructor. Staff
- 541, 542. **Advanced Calculus.** (3:3:0 ea.) F.S. (m) Prerequisite: Math. 334. Staff
- 551, 552. **Introduction to Topology.** (3:3:0 ea.) F.S. (m) Prerequisite: Credit or concurrent registration in Math. 541. Staff
585. **Matrix Analysis.** (3:3:0) (Offered on demand) (m) Prerequisites: Math 372, or 313 or 317. Staff
- 617, 618. **Mathematical Physics.** (3:3:0 ea.) F.S. Prerequisite: Math. 336; recommended: Math. 542. Staff
- 631, 632. **Complex Analysis.** (3:3:0 ea.) (Offered 1964-65 and alternate years) Prerequisites: Math. 332; recommended: Math 542. Staff
- 634, 635. **Theory of Ordinary Differential Equations.** (3:3:0 ea.) (Offered 1965-66 and alternate years) Prerequisite: Math. 435 and consent of instructor. Staff
- 641, 642. **Functions of a Real Variable.** (3:3:0 ea.) (Offered 1965-66 and alternate years) Prerequisite: Math. 542. Staff
645. **Special Topics in Analysis.** (3:3:0) (Offered on demand) Prerequisite: consent of instructor. Staff
- 647, 648. **Partial Differential Equations.** (3:3:0 ea.) Offered 1964-65 and alternate years) Prerequisite: Math. 336; recommended: Math. 542. Staff
- 651, 652. **General Topology I, II.** (3:3:0 ea.) (Offered 1965-66 and alternate years) Prerequisite: consent of instructor. Staff
655. **Special Topics in Topology.** (3:3:0) (Offered on demand) Prerequisite: consent of instructor. Staff
- 671, 672. **Modern Algebra.** (3:3:0 ea.) (Offered 1965-66 and alternate years) Prerequisite: Math. 371. Staff
675. **Special Topics in Algebra.** (3:3:0) (Offered on demand) Prerequisite: consent of instructor. Staff
- 681, 682. **Linear Algebra.** (3:3:0 ea.) (Offered 1964-65 and alternate years) Prerequisite: Math. 372. Staff
695. **Readings in Mathematics.** (1-2:1-2:0) F.S. Staff
699. **Thesis for Master's Degree.** (1-6: Arr.:Arr.) F.S.

Mechanical Engineering Science

(Including Aeronautical and Astronautical Engineering)



Professor: Simonsen.

Associate Professor: Ulrich.

Assistant Professors: Cannon (chairman, 273 ELB), Free*, Heaton.

Instructor: Percival.

The Mechanical Engineering Science Department offers a professional program leading to the degree of Bachelor of Engineering Science in mechanical engineering. The curriculum is fully accredited by the Engineers Council for Professional Development. The courses in the professional curriculum are taught on a rigorous scientific level provided by the preprofessional emphasis on mathematics, physics, and chemistry. The student is also provided with a well-balanced program of social studies, religion, biological science, and humanities.

The prescribed course work in mechanical engineering provides the fundamental engineering skills also taught under more specialized names such as aeronautical engineering, astronautical engineering, rocket engineering, and industrial engineering. In addition, during his third professional year, the student chooses courses to specialize in the area of his interest.

Advanced classroom and laboratory course work is offered in the areas of heat transfer, fluid mechanics, thermodynamics, automatic control, kinematics, stress analysis, machine design, and materials science. These courses coupled with prescribed courses from other departments provide the necessary background for work in such challenging fields as the controls, propulsion, and structures for aircraft, rockets, space vehicles, submarines, and hydrofoil water craft as well as those basic to the high standard of living of our modern age such as design of home appliances, automobiles, and automated manufacturing equipment. In fact, all areas where the fabrication of metals and plastics, flow of liquids and gases, burning of fuel, use of mechanisms, or transfer of heat is required provide professional opportunities for the mechanical engineer.

The extensive background of the faculty combined with modern laboratories and precision scientific equipment will prove valuable to those who wish to undertake special projects in their undergraduate work or research topics in their graduate work. Qualified students in the professional school gain experience by assisting graduate students and faculty on industrial research projects under way in the department. Seminar work and participation in technical meetings sponsored by student organizations provide a rich background for a career in mechanical engineering.

Work leading to graduate degrees is offered by the department. Students interested should consult the graduate catalog.

Entrance Requirements

All students are required to meet the entrance requirements of the University as outlined in preceding pages of this catalog. Requirements for entrance into the preprofessional curriculum are specified in the College of Physical and Engineering Sciences section. After a student satisfactorily completes his work and submits an application to the department chairman, he will be admitted to the three-year professional course in mechanical engineering.

Grade Requirements

Grade requirements for entrance into the professional curriculum are explained in the College of Physical and Engineering Sciences section.

In addition to the regular University academic requirement, a grade of "C" or higher is required in all prescribed courses taken after being admitted to the professional curriculum. If a grade lower than "C" is received in any required course, the student must repeat the course unless he petitions the department faculty and is excused. A "D" grade in a course which is a prerequisite for another course may be considered to fill the prerequisite requirements so that the student may continue in the course sequence. This in no way rescinds the restriction explained above regarding the removal of a grade lower than "C." Deviations from this rule may be made by the department faculty, upon petition, when deviations appear justified. In order to receive a Bachelor of Science degree in mechanical engineering, it is necessary to have a 2.0 minimum average in all course work at the University.

General Education Group Requirements

Engineering science students are subject to all of the general education requirements listed in the Student Academic Services section of this catalog, except that the biological science requirement may be reduced to four semester hours instead of the six semester hours specified. All four hours may be obtained in a single course if desired.

Requirements for Major

To obtain a degree the student must complete the sequence of courses listed below and must work at least one summer during his last three years of residence in an industry related to the field of mechanical engineering. The student should consult in advance with the department chairman regarding his summer employment.

The following abbreviations are used in the description below: Ch.E. for chemical engineering, C.E. for civil engineering, E.E. for electrical engineering, and M.E. for mechanical engineering.

Engineering students may register for 18 hours exclusive of physical education and forum and devotional assemblies in any one semester without obtaining special permission.

Students enrolled in air science should contact that department since some extra work will normally be required to graduate in the time outlined in the following schedule.

Normal Sequence of Courses for Majors

Preengineering Program

See College of Physical and Engineering Sciences section of this catalog.

Professional School of Mechanical Engineering

First Professional Year (Third academic year)			Second Professional Year (Fourth academic year)		
	F	S		F	S
Math. 313 or 317, 336 ..	3	3	M.E. 412, 413	3	3
M.E. 321, 322	3	3	M.E. 431, 432	3	3
C.E. 303, 304	3	3	M.E. 463, 464	1	1
Ch.E. 378		3	M.E. 441		3
E.E. 301, 302	4	4	M.E. 422		2
M.E. 361, 362	2	1	C.E. 401	2	
M.E. 331		1	M.E. 435	3	
E.E. 300	1		Relig. and groups	3	5
Relig.	2		Eng. 216	2	
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$
Total Hours	18 $\frac{1}{2}$	18 $\frac{1}{2}$	Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$

Third Professional Year (Fifth academic year)			C.E. 571	3
	F	S	Group electives	6
M.E. 571, 572	3	3	Dev. assy.	$\frac{1}{2}$
Restricted electives*	6	6	Total Hours	15 $\frac{1}{2}$ 16 $\frac{1}{2}$

The restricted electives are to be chosen from the electives offered by the M. E. Science Department or, by petition, from subjects offered in other departments.

Courses

- 100. Engineering Orientation.** (1:1:0) F.S. Staff
Introduction to the fields and profession of engineering. Required of all freshman engineering students.
- 310. Elements of Fluid Mechanics.** (3:3:0) F.S. Prerequisites: Math. 334; C.E. 302; M.E. 320. Staff
A survey course in fluid mechanics for electrical engineers.
- 320. Elements of Thermodynamics.** (3:3:0) F.S. Prerequisites: Math. 334; Physics 213. Staff
First and second laws; properties of systems; thermodynamics of gases, liquids, and vapors; applications to thermodynamic cycles. Designed for students not majoring in mechanical engineering.
- 321, 322. Thermodynamics.** (3:3:0 ea.) F.S. Prerequisites: Math 334; Physics 213. Staff
A fundamental course in thermodynamics and applications for majors in mechanical engineering science.
- 331. Manufacturing Processes.** (1:1:0) S. Staff
A survey of general manufacturing processes, including smelting, refining, casting, cutting, machining, welding, and joining of engineering materials.
- 361. Mechanical Engineering Instrumentation.** (2:1:3) Arr. Prerequisite: Concurrent registration in M.E. 321. Staff
An introduction to measurements including temperature, pressure, stress, time, power, etc. Also includes experimental work assigned in M.E. 321.
- 362. Mechanical Engineering Laboratory II.** (1:0:3) S. Prerequisites: M.E. 361, completion of or concurrent registration in M.E. 331 and 322, or consent of instructor. Staff
Experimental exercises to demonstrate principles of M.E. To reinforce classroom theory and demonstrate applications the student performs and designs laboratory experiments assigned in M.E. 331 and 332.
- 411. Mechanical Engineering Laboratory.** (1:0:3) Arr. Prerequisite: concurrent registration in M.E. 412. Staff
Lab to accompany M.E. 412. Experimental investigation of fluid flow phenomenon. For civil engineering students only.
- 412. Fluid Mechanics I.** (3:3:0) F.S. Prerequisites: Math 334; C.E. 304; M.E. 320 or 322. Staff
Physical properties of fluids; fluid statics, viscous flow; dimensional analysis; incompressible flow; compressible flow; fluid meters; lift and drag; dynamic similarity; momentum; potential theory; fluid machinery.
- 413. Fluid Mechanics II.** (3:3:0) S. Prerequisites: Math 313 or 317 or 336; M.E. 412. Staff
Compressible flow; shock effects; Fanno and Rayleigh lines; generalized one-dimensional flow.
- 422. Statistical Thermodynamics.** (2:2:0) Arr. Prerequisites: M.E. 321; Stat. 321. Staff
Methods of statistical inference, Jaynes formalism, statistical treatment of perfect gases, discussion of temperature, heat, work, friction, and thermal properties. (Formerly M.E. 522)
- 431. Kinematics.** (3:2:3) Arr. Prerequisite: C.E. 304. Staff
Relative motion of links in mechanisms; velocities and accelerations of machine parts; rolling contact; cams; gearing; synthesis of mechanisms.

- 432. Machine Components.** (3:3:0) Arr. Prerequisite: M.E. 431 or consent of instructor. Staff
Application of properties of materials and engineering mechanics principles to the design of machine elements. Introduction to the theory and design of basic structures, fasteners, joints, mechanical springs, bearings, and gears.
- 435. Mechanical Vibrations.** (3:3:0) Arr. Prerequisites: Math. 336, 317, 334; C.E. 303. Staff
Fundamentals of simple vibrating systems with applications.
- 441. Heat Transfer.** (3:3:0) S. Prerequisites: M.E. 322, 412; Math 317 or 336. Staff
Fundamental principles of heat transfer by conduction, convection, and radiation.
- 463. Mechanical Engineering Laboratory III.** (1:0:3) F. Prerequisites: current registration in M.E. 435, 412, 431 or consent of instructor. Staff
Same as M.E. 362 except experiments are assigned in prerequisite courses.
- 464. Mechanical Engineering Laboratory IV.** (1:0:3) S. Prerequisites: current registration in M.E. 413, 441, 422 or consent of instructor. Staff
Same as M.E. 362 except prerequisite experiments are assigned in prerequisite courses.
- 472. Heating, Ventilating, and Air Conditioning.*** (2:2:0) Arr. Prerequisite: M.E. 322. Staff
Heating and cooling for comfort. Design of warm air, hot water, and steam heating systems for residence and commercial buildings.
- ☐ **C.E. 501. Advanced Mechanics of Materials I.** (3:3:0) (interdepartmental) Arr. Prerequisite: C.E. 303. Staff
- ☐ **C.E. 502. Advanced Properties of Materials I.** (3:3:0) (interdepartmental) Prerequisite: C.E. 401 or equivalent. Staff
- 511. Intermediate Gas Dynamics.** (3:3:0) Arr. Prerequisite: M.E. 413. Staff
Potential theory, small perturbations, method of characteristics, and other related topics.
- 512. Boundary Layer Theory.** (3:3:0) Arr. Prerequisite: M.E. 413. Staff
An introduction to the basic theories of the boundary layer, Navier-Stokes equations, Prandtl's equation. etc.
- 521. Advanced Thermodynamics.*** (3:3:0) Arr. Prerequisite: M.E. 322. Staff
Extended treatment of the fundamentals of thermodynamics including transient conditions and current topics.
- 522. Combustion.*** (3:3:0) Arr. Prerequisite: M.E. 322. Staff
Mass balance and chemical structure; chemical equilibrium and kinetics as applied to combustion; burning models, solid, liquid and gaseous. Deflagration and detonation type burning; properties of fuels and combustion hardware.
- 531. Principles of Automatic Control.*** (3:3:0) Arr. Prerequisites: M.E. 412; E.E. 302; Math. 317 or 313 and 334. Staff
Transfer functions applied to mechanical, hydraulic, pneumatic, and electrical components and their combination. Block diagrams, Nyquist and Routh criteria. Bode's and root locus plots, integral and error rate compensation. Nonlinear systems.
- 533. Stress Analysis of Aerospace Structures.*** (3:3:0) Arr. Prerequisite: C.E. 501 or consent of instructor. Staff
Particular emphasis is given to analysis of aircraft and missile type structures; buckling of columns and compression panels; shear and tension field panels; curved beams and rings; semimonocoque structures.
- 535. Advanced Vibration Analysis.*** (3:3:0) Arr. Prerequisite: M.E. 435. Staff
Vibration characteristics of systems with multiple degrees of freedom; vibrational modes of elastic bodies; random vibrations; simple nonlinear systems. (Formerly M.E. 635)

537. **Advanced Kinematics.*** (3:3:0) Arr. Prerequisite: M.E. 431. Staff
Geometry of constrained motion, with application to point paths; kinematic synthesis; types of mechanisms.
541. **Advanced Heat Transmission.*** (3:3:0) Arr. Prerequisite: M.E. 441. Staff
Extension of M.E. 441 to include numerical and approximate methods of solution, transient problems, and solution of problems by analogy methods.
552. **Mechanical Engineering Materials.** (3:3:0) Arr. Prerequisite: C.E. 502 or consent of instructor. Staff
Content to be of an applied nature; applied metallurgy, design for fatigue, stress concentration in machine members, residual stress, and current topics.
571. **Mechanical Design I.** (3:1:6) Arr. Prerequisites: M.E., 432, 435, 413, 441. Staff
Application of mechanical engineering theory to specific design problems. Emphasis on group projects. Philosophy of design.
572. **Mechanical Design II.** (3:1:6) Arr. Prerequisite: M.E. 571. Staff
Continuation of M.E. 571 with oral presentation of design projects. Preparation of design drawings.
581. **Internal Combustion Engines.*** (3:2:3) Arr. Prerequisite: M.E. 422. Staff
Basic principles; theoretical and actual cycles; performance characteristics with experimental laboratory analysis.
583. **Principles of Turbomachinery.*** (2:2:0) Arr. Prerequisites: M.E. 331, 412. Staff
Analysis and design of all types of turbomachinery.
585. **Jet Propulsion Power Plants.*** (3:3:0) Arr. Prerequisites: M.E. 413, 412. Staff
Analysis of jet propulsion power plants including performance, economics, and matching components.
- 591, 592. **Seminar.*** (1:1:0 ea.) F. Prerequisite: fifth-year standing. Staff
Student and faculty presentation of topics of special and current interest.
- 595, 596. **Special Problems.*** (Arr.) Arr. Prerequisite: consent of department chairman. Staff
597. **Undergraduate Research.*** (Arr.) Arr. Prerequisite: consent of department chairman. Staff
611. **Theories of Fluid Turbulence.**** (3:3:0) Arr. Prerequisite: C.E. 502 or consent of instructor. Staff
612. **Theoretical Hydrodynamics.**** (3:3:0) Arr. Prerequisites: M.E. 413; Math 317 or Math. 313. Staff
- 621, 622. **Thermodynamics Theory I, II.* **** (3:Arr.:Arr. ea.) Arr. Staff
631. **Mechanical Control Systems.**** (3:3:0) Prerequisite: M.E. 531. Staff
635. **Advanced Vibration Analysis II.**** (3:Arr.:Arr.) Prerequisite: M.E. 535. Staff
(Formerly M.E. 636)
637. **Advanced Dynamics of Mechanical Elements.**** (3:3:0) Arr. Prerequisites: Math. 313, 336; M.E. 435. Staff
- 641, 642. **Heat Transfer Theory I, II.**** (3:3:0 ea.) Arr. Prerequisite: M.E. 541. Staff
- 661, 662. **Elasticity in Engineering.**** (3:Arr.:Arr. ea.) Arr. Staff
697. **Research for Master's Degree.**** (Arr.) Arr. Staff
699. **Thesis for Master's Degree.**** (1-6:Arr.:Arr.) Arr. Staff

*Electives offered upon approval of department chairman. Frequency based on demand.

**These are graduate courses offered on demand only. Their full description can be found in the graduate catalog.

Music

Professors: Gates (chairman, C-550 FAC),
Earl, Halliday, Sardoni.

Associate Professors: Goodman, H. Laycock, Nordgren.

Assistant Professors: Ballou, Bradshaw, Cannon, Cundick, Curtis, Keeler, R. Laycock, Nibley, Stubbs, Terry, Wakefield, Woodward.

Instructors: Dalton, Groesbeck, Mason, McMurdie, Weininger.



The Music Department offers courses to students desiring professional preparation in music theory, music education, and applied music; to students desiring a minor in music; and to students who seek a general cultural background in music.

Music Majors

A baccalaureate degree in music can be taken with a major in applied music, music theory, or music education (secondary). The curriculum for a major in applied music or music theory leads to the Bachelor of Arts degree. The curriculum for music education leads to a Bachelor of Music degree.

The Music Department presupposes that a student who wishes to major in music will have had previous training in music before entering the University. In order to determine the degree of attainment in basic musical skills, each entering freshman and transfer student who desires to major in music will be given the Music Department entrance test which is given each semester during the orientation period.

It is assumed that students majoring in music will have a natural interest in concerts, recitals, and lyceums. Infrequent attendance at such events suggests to the Music Department that the student's interest in music is not developed well enough to enable him to be a successful music major and can result, in extreme cases, in a recommendation that the student change to another department.

Inasmuch as the first year program is identical for all music majors, the area of specialization within the Music Department is not chosen until the beginning of the sophomore year. Admission to the various specialized programs will be based upon the following points:

1. **Applied Majors:** Strong achievement in applied music as evidenced in the proficiency examination given at the close of the first year of study.
2. **Music Theory Majors:** Strong achievement in Music 191-2 and 193-4 and generally good scholastic achievement in other courses.
3. **Music Education:** Good balanced achievement in all course work and substantial progress in applied music as evidenced in the proficiency examination given at the close of the first year of study.

The first year course work for all music majors includes:

Course	F	S	Course	F	S
Eng.	3	3	Music 103	2	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Music 107, 108	(2)	(2)
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	(if needed)		
Relig. 121, 122	2	2	Music 160p	2	2
Health 130		2	Ensemble (band, orchestra, chorus, etc.) ..	1	1
Music 191, 192	2	2			
Music 193, 194	2	2			

The annual proficiency examinations are normally given during the first week in May. Students perform representative works studied during the year. The student submits as a part of the examination a repertoire list indicating which pieces are to be performed for the examination. Forms outlining minimum proficiency requirements for each instrument and each major are available at the Music Department office. The proficiency examinations are taken by all students at the end of the first year and by music education majors at the end of the sophomore and junior years.

Music Minors

Those who wish to minor in music are required to take Music 103, 191, 193, 2 hours of ensemble, and 6 hours of electives in music.

Elementary Music Education Minors

Prospective elementary school teachers who desire a minor in music are required to take Music 101, 191, 193, 201, 4 hours of ensemble (band, orchestra, or chorus), and 5 hours of class and/or private piano and voice.

Degree in Applied Music

To receive a Bachelor of Arts degree with a major in applied music, a student completes the first year courses suggested above and the following courses during the remaining three years:

	Hours		Hours
Music 291, 292	8	Ensembles	6
Music 202	2	Music 160p	4
Music 484, 485	6	Music 360p	8
Music 491	3		

(Keyboard majors substitute Music 262, 263, 391, and 463 for the ensemble requirement. Other majors are encouraged to vary their ensemble experience.)

Majors in the various fields of applied music are required to take certain special classes in addition to the above requirements.

Piano majors take Music 565
Organ majors take Music 167, 468, 569
Woodwinds majors take Music 368

Brass majors take Music 370
String majors take Music 372
Voice majors take Music 566, 567, 568

At the end of each semester the applied major auditions before a panel made up of faculty members from his major instrument (or voice) field. The audition at the end of the sophomore year determines his eligibility for advanced applied instruction (Music 360p). The audition at the end of the junior year determines his readiness for the preparation of the required senior recital. The senior recital is normally presented during the Spring Semester of the senior year and replaces the audition for that semester.

The following sequence of courses is recommended for majors in applied music:

Sophomore Year			Junior Year		
	F	S		F	S
Relig.	2	2	Relig.	3	2
Lang. (1st or 2nd year) ..	4	4	Lang. (2nd year)	4	4
Music 202	2	2	Music 484, 485	3	3
Music 291, 292	4	4	Ensemble	1	1
Music 160p	2	2	Music 360p	2	2
Ensemble	1	1	Electives (must include		
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	the special music		
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	classes)		1-2
Electives	2		Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$
			Gen. ed.	2	
			Electives		2
Total Hours	16	16			
			Total Hours	15 $\frac{1}{2}$	15 $\frac{1}{2}$ -16 $\frac{1}{2}$

Senior Year			the special music	
	F	S	classes)	
Music 491		3 1-2	1-2
Ensemble	1	1	Gen. ed. 11-12	6
Music 360p	2	2	Electives	1-2
Electives (must include			Total Hours	15-17 14-16

Degree in Music Theory

For a Bachelor of Arts degree with a major in music theory, a student is required to complete the following music courses or their equivalents:

	Hours		Hours
Music 191, 192, 193, 194, 291, 292, 391, 491, 493, 494	28	Music 495 or 587	3
Music 202	2	Ensemble	4
Music 103, 484, 485	8	Individual instruction on specialty	4
Music 160p or 360p (functional piano, pass sophomore proficiency standards)	4	Music 149 or 349 (Collegium Musicum)	4

The hours to be taken in individual or group instruction may be reduced if a student, as determined by entrance examinations, has already had considerable training in these areas. At the end of each year of individual instruction the student takes an examination on his major instrument or in voice to determine his level of achievement. For the examination, each candidate submits a list of his repertoire indicating compositions or studies especially prepared for the examination. Forms on which a record of the student's repertoire is kept and outlines of instrumental and vocal proficiency requirements are available at the Music Department office.

Majors in music theory participate in musical ensembles a minimum of four semesters of undergraduate training. The student performs in at least two ensembles. A student whose specialty is a band or orchestral instrument takes two hours of instrumental ensemble and two hours of choral ensemble. A student whose specialty is voice sings in at least two vocal ensembles.

The ability to play the piano is an indispensable tool of music theory majors; consequently, every major in music theory must pass a piano proficiency examination (second year standards) during the first semester of residence or take group or individual piano instruction until he passes the examination.

The following sequence of courses is recommended for majors in music theory:

Sophomore Year					
	F	S			
Relig.	2	2	Music 391, 491	3	3
Dev. assy. $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	Music 349	1	
Phys. ed. $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	Music 484, 485	3	3
Hist. 170		3	Ensemble	1	1
Music 291, 292	4	4	Lang.	4	4
Music 149	1		Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$
Music 160p—piano	2	2	Senior Year		
Music 160p—specialty ..	2			F	S
Lang.	4	4	Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$
Total Hours	16	16	Phys. sci. (2 depts.)	3	3
Junior Year			Biol. sci. (2 depts.)	3	3
	F	S	Soc. sci. (dept. other than psychology)		3
Relig.	2	2	Music 493, 494	3	3
Dev. assy. $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	Music 495 or 587	3	
Humanities (literature—upper division)	2		Music 349	1	1
Soc. sci. (Psych. 111) ..		3	Electives (upper division) ..	3	3
			Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$

Degree in Music Education

To receive a Bachelor of Music degree with a composite music education major, a student is required to complete the following music courses or their equivalents:

	Hours		Hours
Music 191, 192, 193, 194, 291, 292, 471 or 472, 481	22	Music 103, 484, 485	8
Music 363*, 364*, 367, 368, 370, 372	9	Ensemble	6
Music 202, 237, 374, 375, 378	10	Private instruction on specialty	12
		Total Hours	67

*For students with instrumental specialties only. Those students taking voice as a specialty should take Music 566 and 567.

(This degree requires additional professional education courses to meet teaching certification requirements. For details see the College of Education section of this catalog.)

Band instrumentalists who pursue one of the music education degrees participate at least one first semester in marching band and one second semester in varsity band, preferably on a minor instrument. Voice majors must sing in at least two types of choral ensembles, and string majors must perform at least four semesters with the orchestra.

For the baccalaureate degree with a composite major in music education the student pursues the following sequence of courses:

Sophomore Year			Music 367			1
	F	S				2
Music 291, 292	4	4	Music 375			2
Music 202		2	Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	
Music 363, 364	1	1	Relig.	2	2	
Music 160p or 360p	2	2	Phys. sci.	3		
Ensemble	1	1	Tchr. Ed. 301	2		
Music 368	2		Music 377		3	
Music 370		2	Health	2		
Music 378		2				
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$	Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	
Relig.	2					
Hist. 170	3					
Lit. (humanities)		3				
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$				
Total Hours	18	18				
Junior Year			Senior Year			
	F	S		F	S	
Music 471 or 472		3	Music 481		3	
Music 484	3		Music 485		3	
Music 160p or 360p	2	2	Music 237		2	
Ensemble	1	1	Relig.		3	
Music 372	2		Soc. sci. (psychology) ..		3	
			Aesthetics		2	
			Music 479	8		
			Tchr. Ed. 310	2		
			Tchr. Ed. 403	4		
			Tchr. Ed. 415	2		
			Total Hours	18	18	

Students electing a Bachelor of Arts degree with a composite music education major should take the above outline plus 16 hours of foreign language.

Every music education major must pass a functional piano proficiency examination before being permitted to student teach.

Music education majors also take an annual proficiency examination covering the materials studied in the student's private lessons on his major instrument or voice. The sophomore proficiency standards must be passed before a student is allowed to continue into advanced study (Music 360p). A minimum of one year of advanced study is required before graduation. The final proficiency examination is taken at the end of the year of advanced study at which time the student will have completed all applied music requirements for his degree.

Every music education major must have appeared a minimum of 30 minutes in solo and chamber music recital.

Courses

- 101. Introduction to Music.** (3:3:0) F.S.Su. (G-HA)
Cannon, Dalton, Earl, Wakefield, Woodward
Nontechnical introduction to the fundamental concepts of melody, rhythm, harmony, form, etc., as a basis for understanding and enjoying the masterpieces of our musical heritage. Open to all students without previous training in music.
- 102. Music Fundamentals and Skills for Elementary Education Teachers.** (2:2:1)
F.S.Su. Groesbeck, Terry
Practical experiences in fundamentals and skills of music. Instruction in techniques of playing simple melody and harmony instruments and writing music symbols. Required of elementary education majors.
- 103. Survey of Music Literature.** (2:2:0) F.S.Su. (G-HA m) Prerequisite: for nonmusic majors Music 101 or equivalent. Cannon, Nibley, Stubbs, Wakefield
An intensive study of the history of music including styles, forms, and mediums from the Middle Ages to the present. Required of all music majors during the first year of study.
- 105. Class Piano for Beginners in Music.** (2:2:0) F.S.Su. McMurdie, Staff
Minimum of one-hour daily practice required outside of the class. Instruction in notation of music and in keyboard technique, especially designed for prospective elementary school teachers.
- 106. Group Organ Instruction.** (2:2:0) F.Su. Prerequisite: moderately advanced proficiency at the piano. Special fee. Keeler
Elements of organ manual and pedal technique, elementary repertoire, application to church service.
- 107, 108. Group Piano Instruction.** (2:2:0 ea.) F.S. Keeler, McMurdie, Wakefield
Designed for those music majors and minors who cannot pass the piano proficiency examination. Not open to piano majors.
- 110. University Chorale.** (1:0:5) F.S.Su. Weinzinger
- 116. Male Chorus.** (1:0:5) F.S. Prerequisite: consent of director. Woodward
- 119. Women's Chorus.** (1:0:5) F.S. Prerequisite: consent of director. McMurdie
- 125. A Cappella Choir.** (1:0:5) F.S. Prerequisite: consent of director. Weinzinger
- 128. Opera Workshop.** (1:0:5) F.S.Su. Prerequisite: consent of director. Curtis
- 131. Oratorio Choir.** (1:0:5) F.S. Prerequisite: consent of director. Halliday
- 134. Basic Choral Training.** (1:0:2) F. Prerequisite: admission by audition. Staff
The development of basic skills in choral singing and a knowledge of music fundamentals preparatory to membership in select choral groups.
- 135. Varsity and Marching Band.** (1:0:5) F.S. Prerequisite: consent of director. Ballou
- 138. Concert Band.** (1:0:5) F.S.Su. Prerequisite: consent of director. R. Laycock
- 144. Theatre Orchestra.** (1:0:5) F.S.Su. Prerequisite: consent of director. Sardoni
- 147. Symphony Orchestra.** (1:0:5) F.S.Su. Prerequisite: consent of director. Sardoni
- 149. Collegium Musicum.** (1:0:3) F.S. Woodward
Designed for advanced instrumentalists and vocalists (nonmusic majors as well as music majors) for credit or audit. Reading of music literature and study of performance practices, medieval to contemporary. Some reading performances for music classes and recital series.
- 150. Chamber Music Brass, Piano, Ancient Instrument, String, Vocal or Woodwind Ensemble.** (1:0:3) F.S.Su. Staff

- 159p. Beginning Applied Instruction.** (2:1:0) F.S.Su. Staff
 Fifteen, one-half hour lessons per semester. One to two hours of practice per day required. Special fee.
 Brass—Trumpet, Coronet, French Horn, Trombone, Baritone, Tuba:
Ballou, R. Laycock
 Harp: Bradley
 Harpsichord: Wakefield
 Organ: Keeler
 Percussion: R. Laycock
 Piano: Bradshaw, Cundick, Fitzroy, Keeler, Nelson, Nibley, McMurdie, Wakefield
 Recorder:
 Strings—Violin, Viola, Cello, String Bass:
Dalton, Goodman, H. Laycock, Nordgren, Sardoni
 Voice: Curtis, Earl, Halliday, Jepperson-Madsen, F. Madsen, Terry, Weinzinger, M. Woodward, R. Woodward
 Woodwinds—Flute, Oboe, Clarinet, Bassoon, Saxophone:
Bos, R. Laycock, Stubbs
- 160p. Intermediate Applied Instruction.** (2:1:0) F.S.Su. Prerequisite: Admission by audition. Staff
 Fifteen, one-half hour lessons per semester. One to two hours of practice per day required. Special fee. (For staff see 159p.)
- 165, 166. Diction for Singers.** (1:1:1 ea.) F.S.Su. Prerequisite: Should be taken concurrently with private or group voice study. 165 a prerequisite for 166. Halliday
 First semester: a study of English, Italian and Latin diction as related to singing. Second semester: a study of German and French diction as related to singing.
- 167. Organ Problems.** (2:2:0) F.Su. Keeler
 Registration, accompaniment playing, and related problems.
- 170. Group Vocal Instruction.** (1:2:0) F.S.Su. Weinzinger, Woodward
 Class instruction for beginners in vocal production.
- 191, 192. First Year Theory.** (2:2:1 ea.) F.S. (m) Prerequisites: reading ability in music and one year of piano study or concurrent registration in Music 107, 108. Staff
 Tonal harmony, part-writing, modulation, analysis, simple forms. Must be taken with 193 and 194 respectively unless required proficiency in music skills is demonstrated.
- 193, 194. First Year Music Skills.** (2:0:4 ea.) F.S. (m) Prerequisites: reading ability in music and one year of piano study or concurrent registration in Music 107, 108. Staff
 Ear training, diction, sight singing, keyboard. Two two-hour periods per week. Must be taken with 191 and 192 respectively unless proficiency in part-writing is demonstrated.
- 201. Baton Technique and Hymnody.** (2:2:0) F.S.Su. Staff
 Introduction to the fundamental concepts and skills of baton technique and congregational hymn singing and conducting. Open to all students.
- 202. Essentials in Conducting.** (2:2:0) F.S. Prerequisites: Music 103, 191, 192. Staff
 The fundamental course for the development of complete body skills and coordinations necessary for the conductor. Required of all music majors.
- 237. Music and Materials for Elementary Children.** (2:2:1) F.S.Su. Prerequisite: Music 102. Groesbeck, Terry
 Materials, methods, and problems pertaining to the teacher of music to elementary children. Required of all elementary education and music education majors.

- 262, 263. Piano Accompaniment.** (1:1:2 ea.) F.Su. Nibley
Study and practical application of the basic aspects of accompanying.
- 291, 292. Second Year Theory.** (4:4:3 ea.) F.S. Prerequisites: Music 192, 194. Staff
Diatonic and chromatic harmony, modulation, ear training, dictation, sight singing, keyboard, chorale harmonization, form and analysis, elementary composition. Three-hour ear-training lab per week.
- 294. Theory Review.** (2:0:5) Su. Prerequisite: Music 292 or equivalent. Staff
Designed to help transfer and graduate students regain the necessary understanding and skills needed to do advanced work in music.
- 310. University Chorale.** (1:0:5) F.S.Su. Weininger
- 316. Male Chorus.** (1:0:5) F.S. Prerequisite: consent of director. Woodward
- 319. Women's Chorus.** (1:0:5) F.S. Prerequisite: consent of director. McMurdie
- 325. A Cappella Choir.** (1:0:5) F.S. Prerequisite: consent of director. Weininger
- 328. Opera Workshop.** (1:0:5) F.S.Su. Prerequisite: consent of director. Curtis
- 331. Oratorio Choir.** (1:0:5) F.S. Prerequisite: consent of director. Halliday
- 335. Varsity and Marching Band.** (1:0:5) F.S. Prerequisite: consent of director. Ballou
- 338. Concert Band.** (1:0:5) F.S.Su. Prerequisite: consent of director. R. Laycock
- 344. Theatre Orchestra.** (1:0:5) F.S.Su. Prerequisite: consent of director. Sardoni
- 347. Symphony Orchestra.** (1:0:5) F.S.Su. Prerequisite: consent of director. Sardoni
- 349. Collegium Musicum.** (1:0:3) F.S. Woodward
Designed for advanced instrumentalists and vocalists (non-music majors as well as music majors) for credit or audit. Reading of music literature and study of performance practices, medieval to contemporary. Some reading performances for music classes and recital series.
- 350. Chamber Music, Brass, Piano, Ancient Instrument, String, Vocal or Woodwind Ensemble.** (1:0:3) F.S.Su. Staff
- 360p. Advanced Major Instrumental Applied Instruction.** (2:1:0) F.S.Su. Prerequisite: Pass sophomore proficiency standards. Staff
Fifteen, one-half hour lessons per semester. One to two hours of practice required per day. Special fee. (For staff see Music 159p.)
- 363. 364. Vocal Workshop.** (1:0:2 ea.) F.S. Woodward
Voice building, problems of solo and group singing, and survey of solo and small ensemble literature. Designed for music education majors with instrumental specialties only. Those students taking voice as specialty should not enroll in this class.
- 367. Percussion Workshop.** (1:0:3) F.S. Prerequisite: Music 192 or equivalent. Staff
Designed to help music education majors learn to play and to teach percussion instruments. Survey of materials.
- 368. Woodwind Workshop.** (2:0:5) F.S. Prerequisites: Music 192 or equivalent. R. Laycock, Stubbs
Designed to help music education majors learn to play and to teach woodwind instruments. Survey of materials.
- 370. Brass Workshop.** (2:0:5) F.S. Prerequisite: Music 192 or equivalent. Ballou, Mason
Designed to help music education majors learn to play and to teach brass instruments. Survey of materials.

- 372. String Workshop.** (2:0:5) F.S. Prerequisite: Music 192 or equivalent.
Dalton, Sardoni
Designed to help music education majors learn to play and to teach string instruments. Survey of materials.
- 374. Choral Practicum.** (2:0:5) F.S.Su. Prerequisites: Music 202, 364, or equivalent.
Earl, Woodward
Designed for music education majors. Experience in choral conducting and singing of typical school materials. Observation and application of rehearsal techniques.
- 375. Instrumental Practicum.** (2:0:5) F.S.Su. Prerequisites: Music 202, 367, 368, 370, 372, or equivalent.
R. Laycock
Experience for music education majors in orchestra and band conducting and playing of school materials on the students' minor instruments. Observation and application of rehearsal techniques.
- 377. Secondary Teaching Procedures.** (3:3:1) F.S. Prerequisite: Instruction 301.
Staff
The development of music education concepts; philosophy, objectives, principles, management and methodology. Eighteen hours of participation in the laboratory school is required.
- 378. General Music Practicum.** (1:0:5 for $\frac{1}{2}$ semester) S. Terry
Designed for music education majors. Experience in materials, methodology, and management of the general music education program in public school.
- 391. Harmony at the Keyboard.** (3:3:0) F. Prerequisites: Music 192 and moderately advanced keyboard technique.
Keeler
Harmonization of figured and unfigured basses and other voices; cadences, sequences, transpositions, modulations, and improvisations at the keyboard.
- 463. Piano Accompanying.** (1:0:3) F.S.Su. Staff
- 468. Organ Problems.** (2:2:0) S. Prerequisites: Music 167, advanced standing as an organ student, and consent of instructor.
Keeler
Registration, accompaniment playing, and related problems.
- 471. Sixteenth Century Counterpoint.** (3:3:0) F.Su. Prerequisite: Music 292.
Bradshaw, Cundick, Nordgren
- 472. Eighteenth Century Counterpoint.** (3:3:0) S.Su. Prerequisite: Music 292.
Bradshaw, Cundick, Nordgren
- 479. Secondary Student Teaching.** (8:full day, 1st and 2nd blocks of semesters) F.S. Prerequisite: Music 377. Staff
See Education 479.
- 481, 482. Orchestration.** (3:3:0 ea.) F.S.Su. Prerequisite: Music 292.
Bradshaw, Gates
- 484, 485. History of Music.** (3:3:0 ea.) F.S.Su. (G-HA) Prerequisites: Music 192 or Music 101, 102 and 103 or equivalent.
Cannon, Wakefield
- 491. Analytical Techniques.** (3:3:0) S.Su. Prerequisite: Music 292. Bradshaw
Development of skill in recognizing processes by which the basic elements of music are organized into compositions of various forms and styles.
- 537x. Music for Elementary School Teachers (Advanced).** (2:2:0) Home Study only. Prerequisites: Music 102, 237. Groesbeck
Experiences in teaching and various music activities in the elementary school.
- 565. Piano Pedagogy.** (2:2:0) S. Prerequisite: Advanced standing as a pianist. Keeler
Methods, materials, and problems in teaching piano.

- 566, 567. **Vocal Repertoire.** (1:0:2 ea.) F.S.Su. Prerequisite: Advanced ability as a singer. Weinzinger
568. **Vocal Pedagogy.** (2:2:0) S.Su. Prerequisite: Advanced ability as a singer. Halliday
569. **Organ Pedagogy.** (2:2:0) S. Prerequisite: Music 468. Keeler
583. **Acoustics of Music.** (3:3:0) S. (Offered 1965-66 and alternate years) Prerequisite: Music 292. D. Monson
- 587, 588. **Composition.** (3:3:0 ea.) F.S.Su. Prerequisite: Music 292. Bradshaw, Cundick, Gates
601. **Music in the Elementary School.** (2:2:0) F.Su. Prerequisites: Music 237 and the equivalent of an elementary education teaching minor in music. Groesbeck
603. **Music in the Junior High School.** (2:2:0) S.Su. Prerequisite: Music 601. Goodman
605. **Influence of Music on Behavior.** (3:3:0) F.Su. Prerequisite: general psychology, sociology, or equivalent. Goodman
610. **Supervision and Administration of Music in the Public Schools.** (2:2:0) S. Su. Goodman
612. **Music Education in Society.** (3:3:0) S. Prerequisites: Music 484, 485, or equivalent. Goodman
613. **Basic Concepts in Music Education.** (2:2:0) F.Su. Goodman
Required of all candidates for graduate music degrees.
615. **Vocal Methods, Materials, and Resources.** (2:2:0) F.Su. Prerequisite: Music 479 or equivalent. Halliday
616. **Instrumental Methods, Materials, and Resources.** (2:2:0) S.Su. Prerequisite: Music 479 or equivalent. H. Laycock
620. **Advanced Conducting.** (2:2:0) F.Su. Prerequisites: Music 374, 375 or equivalent. Sardoni
625. **Summer Music Clinic.** (2:4:4) (Two weeks during clinic) Su. Staff
May be counted as either music education or applied music.
- 630. **Special Lectures in Music Education.** (2:2:0) Su. Prerequisite: certification in music plus teaching experience. Staff
- 635. **Musical Research Techniques.** (3:3:0) F.Su. Prerequisite: graduate standing or consent of instructor. Cannon, Earl
Required of all candidates for graduate music degrees.
637. **Medieval and Renaissance Music.** (4:4:0) F.Su. Prerequisites: Music 484, 485, or equivalent. Cannon
638. **Music of the Baroque Period.** (3:3:0) S.Su. Prerequisites: Music 484, 485, or equivalent. Cannon, Wakefield
639. **Classic and Romantic Music.** (4:4:0) F.Su. Prerequisites: Music 484, 485, or equivalent. Cannon, Wakefield
641. **Special Lectures in Musicology.** (3:3:0) F.S.Su. Prerequisites: Music 484, 485, or equivalent. Staff
648. **Collegium Musicum.** (1:0:3) F.S. Prerequisite: consent of director. Cannon
Practical experience in designing programs, outlining music and preparing notes of music from the medieval to modern times.
652. **History of Notation and Paleography.** (3:3:0) F. (Offered 1964-65 and alternate years) Prerequisites: Music 484, 485, 637, or equivalent. Cannon

656. **Hymnology.** (2:2:0) S. Prerequisites: Music 484, 485, or equivalent. Staff
- 660p. **Graduate Applied Instruction.** (2:1:0) F.S.Su. Prerequisite: Completion of undergraduate applied proficiency requirements and audition. Staff
Fifteen, one-half hour lessons per semester. Two to three hours of practice required per day. Special fee. (For staff see Music 159p.)
663. **Solo Recital.** (2:0:6-10) F.S.Su. Bradshaw
Required of all graduate students minoring in applied music.
673. **Advanced Problems in Musical Structure.** (3:3:0) F.Su. Prerequisites: Music 491 and 572. Bradshaw
675. **Materials of Modern Music.** (3:3:0) S.Su. Prerequisite: Music 673.
Bradshaw, Cundick, Gates
686. **Pedagogy of Music Theory.** (3:3:0) F.Su. Prerequisite: Music 292. Nordgren
- 687, 688. **Composition.** (3:3:0 ea.) F.S.Su. Prerequisite Music 588 or equivalent.
Bradshaw, Cundick, Gates
693. **Pro-Seminar in Music.** (2:2:0) S.Su. Prerequisites: Music 484, 485, 635, or equivalent, and approval of advisory committee.
Cannon, Goodman, H. Laycock
Required of all candidates for graduate music degrees.
694. **Independent Readings.** (2:0:6) F.S.Su. Prerequisite: Music 693 or equivalent.
Cannon, Goodman, H. Laycock
695. **Independent Readings.** (2:0:6) F.S.Su. Prerequisite: Music 693 or equivalent.
Cannon, Goodman, H. Laycock
698. **Composition for Master's Degree.** (2-6:Arr.:Arr.) F.S.Su. Prerequisite: Approval of the Music Department Graduate Committee based upon evidence of ability in composition as manifested in a preliminary work. Bradshaw
To be submitted in lieu of a thesis by candidates for the master's degree majoring in composition.
699. **Thesis for Master's Degree.** (2-6:Arr.:Arr.) F.S.Su. Prerequisite: Approval of Music Department Graduate Committee. Staff
Candidates for the master's degree are required to show competence in writing and research before work is begun on the thesis.
753. **Advanced Problems in Notation.** (3:3:0) S. (Offered 1964-65 and alternate years) Prerequisite: Music 652. Cannon
754. **History of Musical Instruments.** (3:3:0) F. (Offered 1965-66 and alternate years) Prerequisites: Music 484, 485, or equivalent. Wakefield
785. **Historical Aspects of Music Theory.** (3:3:0) S.Su. (Offered 1964-65 and alternate years) Prerequisite: Music 292. Nordgren
794. **Seminar in Music.** (3:3:0) F.S.Su. Prerequisites: Music 635, 693, or equivalent, and approval of graduate advisory committee.
Cannon, Goodman, H. Laycock
799. **Dissertation for Ph.D. Degree.** (Arr.) F.S.Su. Prerequisite: approval of graduate advisory committee. Staff

Nursing

Professor: Allen (dean, 2240 SFLC).

Assistant

Professors: Adamson, Allred, Briick, Cameron, Felkner, Geddes, Holley, Morrison, Potter.

Instructors: Alward, Conrad, Wheeler.

Special

Instructors: Bruton, Okelberry.



Baccalaureate Degree

Requirements for a Composite Major and Minor

First Year

	F	S	Su
Relig. 121, 122	2	2	
Eng. 111, 112	3	3	
Sociol. 111	3		
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Zool. 105	3		
Zool. 261 and 262		5	
Chem. 101 or 151 (1st field)	4		
Phys. sci. (2nd field)		3	
Nursing 201		2	
Nursing 211		2	
Psych. 111			3
Bact. 121			3
Food & Nutr. 115			2
H.D.F.R. 210			3
Total Hours	15$\frac{1}{2}$	17$\frac{1}{2}$	11$\frac{1}{2}$

Second Year

	F	S	Su
Relig.	2	2	2
Phys. ed.	$\frac{1}{2}$		
Nursing 202	5		
Nursing 212	5		
Nursing 275		6	
Nursing 285		5	
Bact. 311	2		
Humanities (1st and 2nd field)		3	3
Hist. 170			3
Total Hours	14$\frac{1}{2}$	16	8

Third Year

	F	S	Su
Relig.	2	2	
Nursing 375	6		
Nursing 385	5		
Nursing 351		4	
Nursing 361		6	
Sociol. 403		2	
Humanities (3rd field) 3			
Total Hours	16	14	

Fourth Year

	F	S	Su
Relig.	2		
Nursing 421	3 or 3		
Nursing 431	4 or 4		
Nursing 475	2 or 2		
Nursing 485	4 or 4		
Nursing 478		4	
Nursing 488		6	
Nursing 490		3	
Humanities		3	
Total Hours	15	16	

Associate Degree

First Year				Second Year			
	F	S	Su		F	S	Su
Psych. 111	3			Relig. 211, 212	2		2
Chem. 100	2			Sociol. 111	3		
Eng. 111, 112	3		3	Nursing 250	10		
Chem. Lab 104	1			Hist. 170		3	
Zool. 105	3			Nursing 260		9	
Food & Nutr. 115	2			Nursing 270		3	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$		Nursing 280			8
H.D.F.R. 210		3					
Bact. 121		3		Total Hours	15	15	10
Relig. 121, 122		2	2				
Zool. 261		3					
Zool. Lab 262		2					
Nursing 150			8				
Total Hours	14 $\frac{1}{2}$	13 $\frac{1}{2}$	13				

Courses

150. **Fundamentals of Nursing.** (8:4:16) Su. Prerequisites: Chem. 100, Bact. 121, Zool. 261 and 262. Felkner, Staff

For associate degree program. Includes principles and practice of nursing fundamentals. Emphasis is placed on scientific principles and maintenance of normal physiology.

201. **Fundamentals of Nursing.** (2:2:0) S. Prerequisites: Sociol. 111, Chem. 101 or 151, Zool. 105 and concurrent registration in Zool. 261 and 262.

Bruton, Geddes, Morrison, Wheeler
Introduction to nursing. Emotional, spiritual, social, and physiological needs of patients in relationship to specific nursing skills and techniques fundamental to the maintenance of health and life.

202. **Introductory Medical-Surgical Nursing.** (5:5:0) F. Prerequisites: Nursing 201, Bact. 121, Food & Nutr. 115 and completion of or concurrent registration in H.D.F.R. 210 and concurrent registration in Bact. 311.

Bruton, Geddes, Morrison, Wheeler
Introduction to the essentials of medical-surgical nursing with emphasis on asepsis and pharmacology.

211. **Fundamentals of Nursing Laboratory.** (2:0:8) S. Prerequisites: concurrent registration in Nursing 201. Bruton, Geddes, Morrison, Wheeler

Supervised hospital experience to aid in the identification of patients' needs and in the development of fundamental nursing skills.

212. **Introductory Medical-Surgical Nursing Laboratory.** (5:0:20) F. Prerequisite: concurrent registration in Nursing 202.

Bruton, Geddes, Morrison, Wheeler
Selected laboratory experiences on pediatric, medical, and surgical hospital units to further develop nursing skills and implement nursing principles relative to operating room, administration of medications, physical therapy, nutrition, diagnostic procedures, and oxygen therapy.

250. **Introductory Medical-Surgical Nursing.** (10:4:24) F. Prerequisites: Nursing 150. Felkner, Staff

For associate degree program. Provides opportunity for furthering nursing skills and understandings founded on principles from the physical, biological and behavioral sciences.

260. **Medical-Surgical Nursing.** (9:4:20) S. Prerequisite: Nursing 250.

Felkner, Staff
For associate degree program. Provides bedside nursing including early detection of illness, care during acute illnesses, rehabilitation, health promotion, health teaching, and ability to function as a member of the nursing team.

- 270. Psychiatric Nursing.** (3:1:8) S. Prerequisites: Nursing 250 and concurrent registration in Nursing 260. Felkner, Staff
For associate degree program. Emphasis is placed on the recognition of nursing problems of the emotionally ill patient and the connotations of the illness including the need to establish priorities for nursing care.
- 275. Intermediate Medical-Surgical Nursing.** (6:6:0) S. Prerequisite: Nursing 202. Adamson, Briick, Conrad, Staff
Continuation of medical-surgical nursing principles with an emphasis on energy, sensation, body metabolism, reproductive development and sensory perception.
- 280. Maternal and Child Health Nursing.** (8:4:16) Su. Prerequisites: Nursing 260, 270, and concurrent registration in Bact. 311. Felkner, Staff
For associate degree program. This course places emphasis on the family as a unit of society. The student is helped to gain knowledge and understanding of the basic needs in the nursing care of mothers, infants, and children, in health and illness.
- 285. Intermediate Medical-Surgical Nursing Laboratory.** (5:0:20) S. Prerequisite: concurrent registration in Nursing 275. Adamson, Conrad, Staff
Experience in providing direct nursing care to patients with acute endocrine, metabolic, circulatory and cardiac problems.
- 288. Family Health and Home Nursing.** (1:1:0) F.S. (Eight-week block) Staff
For nonmajors. Essential knowledge and attitudes about healthful family living. Skills in giving home nursing care to the sick or injured. Essentials of maternal health and child care.
- 351. Maternal and Child Health Nursing.** (4:4:0) S. Prerequisites: Nursing 375 and completion of or concurrent registration in Sociol. 403. Alward, Cameron, Potter
Family-centered study of parenthood with a focus on mothers throughout the maternity cycle, newborn infants, and children.
- 361. Maternal and Child Health Nursing Laboratory.** (6:0:24) S. Prerequisite: concurrent registration in Nursing 351. Alward, Cameron, Potter
Experience with families and direct nursing care of mothers and children in physicians' offices, clinics, homes, schools and hospital divisions.
- 375. Advanced Medical-Surgical Nursing.** (6:6:0) F. Prerequisites: Nursing 275. Adamson, Stevensen, Staff
Advanced study of medical-surgical nursing principles emphasizing complex problems related to sensation, motion, body regulation, and maintenance of health and life.
- 385. Advanced Medical-Surgical Nursing Laboratory.** (5:0:20) F. Prerequisite: concurrent registration in Nursing 375. Adamson, Stevensen, Staff
Advanced experience in providing nursing care for children and adults with complex problems of locomotion, cerebral and spinal cord dysfunction, endocrine and fluid balance impairment with emphasis on rehabilitation.
- 405. Advanced Medical-Surgical Nursing.** (5:5:0) TBA Prerequisites: Utah licensure to practice as an R.N. and consent of instructor. Cochran, Staff
For nonmajors. Advanced nursing theory pertinent to the critically ill patient requiring intensive nursing care. Study designed to develop nurse clinicians.
- 415. Advanced Medical-Surgical Nursing Laboratory.** (6:0:24) TBA Prerequisite: concurrent registration in Nursing 405. Cochran, Staff
For nonmajors. Laboratory experiences designed to develop skills in clinical observation and judgment, problem solving, communications, interpersonal and public relations, management, and technology.

- 421. Mental Health and Psychiatric Nursing.** (3:6:0) F.S. (Eight-week block)
Prerequisites: Psych. 111, Sociol. 403, and Nursing 375. Morrison
Critical examination of the changing concepts in the care of psychiatric patients. Orientation to the place of the nurse in the mental health movement.
- 431. Mental Health and Psychiatric Nursing Laboratory.** (4:0:32) F.S. (Eight-week block) Prerequisite: concurrent registration in Nursing 421. Morrison
Guided participation in giving care to psychiatric patients with special emphasis in the therapeutic and rehabilitation aspects of nursing in the hospital. Observation in selected community agencies.
- 475. Principles of Public Health Nursing.** (2:4:0) F.S. (Eight-week block) Prerequisites: Nursing 351 and concurrent registration in Nursing 485. Lagerstrom, Allred
Purpose and organization of nursing in the home and community nursing. The principles of comprehensive family service in home, school, and community.
- 478. Senior Comprehensive Nursing.** (3:3:0) F.S. Prerequisites: Nursing 351 and 375. Staff
Principles of nursing, teaching, supervision, administration, research, and their implications for leadership in professional nursing.
- 485. Public Health Nursing Laboratory.** (4:0:32) F.S. (Eight-week block) Prerequisite: concurrent registration in Nursing 475. Lagerstrom, Allred
Experience in public health nursing agency in giving comprehensive nursing care to families and in working with allied professional workers and community agencies.
- 488. Senior Comprehensive Nursing Laboratory.** (6:0:24) F.S. Prerequisite: concurrent registration in Nursing 478. Staff
An analytical approach to professional responsibilities and functions in nursing with emphasis on nursing team and leadership activities.
- 490. Senior Seminar and Professional Problems.** (3:3:0) F.S. Prerequisite: senior standing in nursing. Allen
A study of the origin, development and significance of the nursing profession and its relationship to the present. Professional opportunities and responsibilities identified, with an emphasis on current patterns, problems, and trends in nursing.

Philosophy

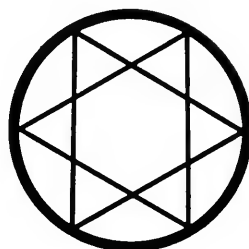
Professors: Riddle (coordinator, 218 JS),
Yarn.

Associate Professors: Horsley, Madsen.

Assistant

Professor: Patch.

Instructor: Cook.



(An interdepartmental area only)

No course in this area carries general education credit for religion.

An undergraduate minor may be obtained in this area, but no major is available. Under certain conditions a graduate minor may be obtained in philosophy; for further information in this regard, contact the coordinator.

Requirements for a Philosophy Minor

An undergraduate philosophy minor requires a minimum of 14 hours of course work which must include all of the following courses: Phil. 380, 381, 470, and 471.

Courses

- 380. Survey of Philosophy.** (2:2:0) F.S.Su. Home Study also. (G-HA m) Staff
Introduction to types, fields, and problems of philosophy.
- 381. Deductive Logic.** (2:2:0) F.Su. (G-HA m) Riddle
Formal aspects of language and deductive logic.
- 382. Inductive Procedures.** (2:2:0) S. (G-HA m) Riddle
Scientific methods.
- 385. Ethics: Plato to Dewey.** (2:2:0) F.Su. (G-HA m) Patch, Yarn
An historical approach to the major ethical theories of the Western world.
- 386. Introduction to Philosophy of Religion.** (2:2:0) F. (G-HA m) Madsen, Yarn
A comparative study of major assumptions in religious thought.
- 470. History of Ancient Philosophy.** (3:3:0) F.Su. (m) Yarn
Western philosophy from the 6th century B.C. to the 5th century A.D.
- 471. History of Modern Philosophy.** (3:3:0) S.Su. (m) Yarn
Western philosophy from the 6th century to the 19th century.
- 472. Contemporary Ethics.** (2:2:0) S.Su. (m) Madsen, Patch
Examination of the meaning and function of moral judgments and the bases of ethical commitment.
- 473. Philosophy of Science.** (2:2:0) F. 1965 (m) Riddle
Examination of the conceptual framework of modern science.
- 474. Types of Religious Philosophy.** (2:2:0) F. (G-HA m) Madsen, Yarn
Survey of philosophical bases of Christian religion.
- 475. Contemporary Anglo-American Philosophy.** (2:2:0) F.S.Su. (m) Madsen
Men and movements in naturalism and logical positivism.

476. **Contemporary Continental Philosophy.** (2:2:0) F.S.Su. (m) Madsen
20th century developments in existentialism, phenomenology, and Marxism.
477. **Scholasticism, Humanism, Mysticism.** (2:2:0) F.S.Su. (m) Horsley
483. **Problems of Knowledge.** (2:2:0) F. (G-HA m) 1964 Riddle
Analysis of how experience becomes knowledge.
498. **Readings in Philosophy.** (1-2:2:0)
Selections from the literature of the history of philosophy.
591. **Seminar: Philosophical Analysis.** (2:2:0) S. 1965 Riddle
592. **Seminar: History of Philosophy.** (2:2:0) S.Su. Yarn
593. **Seminar: Philosophy of Religion.** (2:2:0) S.Su. Madsen
594. **Seminar: Philosophy of Science.** (2:2:0) S. 1966 Riddle
688. **Readings in Philosophy.** (1-4:1-4:0) F.S.Su. Staff



Instructor and students facing class in philosophy

Physical Education

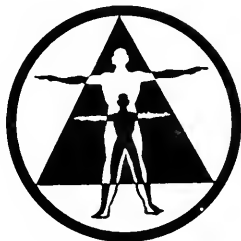
Professors: Geddes (chairman—men, 248 SFH), Holbrook (chairman—women, 303 WG), Hart, Hartvigsen, E. R. Kimball.

Associate Professors: Bangerter, Soffe, Watts.

Assistant Professors: Dixon, Hafen, A. Heaton, Jacobson, Robison, Roundy, Shaw, Tuckett.

Instructors: Anderson, Apostol, Bunker, Call, deHoyos, Doman, Francis, Grimmett, Jones, C. R. Kimball, Lindley, Michaelis, Moe, Naylor, Parry, Rigby, Tucker, Uibel, Wallace, Witbeck.

Special Instructors: Hawkes, Oliphant, Vernon, Yerg.



Each student registering at the University is required to complete one physical education course in the 100-199 series during each semester of his freshman and sophomore years. Transfer students must have the equivalent or take the courses before graduation. Exceptions: (1) Students who are majoring in and who complete the course in engineering science together with requirements for an air science commission are not subject to the physical education requirement. (2) Engineering science students who withdraw from the air science program after two years are exempt from one semester hour of physical education.

A variety of activities is available for selection. Two years' work in physical education activity will provide the student with an opportunity for organic development, neuro-muscular skill, social contact in game and team situations, and other carry-over values.

Extracurricular activities are promoted for student participation: games, sports, hikes, dances, and intramurals. The department urges all students to participate regularly in some form of physical activity during their four years here.

Men students using the towel service are required to make a \$3.00 deposit on a towel and a padlock, \$2.25 of which is refundable at the end of the school year upon return of the padlock and the last towel issued.

A thorough physical examination is required of each freshman student upon entering the University. Any student desiring exemption from physical education for medical reasons must obtain an excuse from the University physician. Written statements from a personal physician must be approved by the University physician.

Each student registered for physical education activity courses is required to provide himself with the official uniform which may be purchased at the Student Service Center.

Major Requirements

Physical Education—Men

Five-Year Program: Men majors may elect to complete this program in five academic years and may specialize either in physical education teaching or athletic coaching. Those electing an emphasis in physical education teaching are strongly urged to minor in health education; those in athletic coaching are encouraged to minor in an academic area other than health education.

Four-Year Program: Majors may complete all course work in four academic years by carrying a heavier course load each semester.

Core Courses (30 Hours)

All men majors will take the following core courses: Phys. Ed. 181, 182,

201, 231, 232, 233, 234, 235, 236, 280, 330, 341, 344, 378, 406, 413, 446, 462, and 543.

Physical Education Teaching Emphasis (17 Hours)

In addition to the above core courses men majors electing this emphasis will take the following courses: Three of these five courses: Phys. Ed. 370, 371, 372, 373, 374; 464, 514, 570, 571, and three hours of electives from list of elective courses below.

Athletic Coaching Emphasis (17 Hours)

In addition to the above core courses men majors electing this emphasis will take the following courses: Phys. Ed. 370, 371, 372, 373, 374, 511, 541, and four hours of electives from list of elective courses below.

Elective Courses for Physical Education Majors

Psych. 321; Speech 102; Sociol. 383; Rec. 337, 387; Relig. 365; Phys. Ed. 250, 382, 283, 284, 285, or 574.

Certain substitutes for transfer students are subject to the approval of the director of the Undergraduate Professional Program.

Physical Education—Women

Phys. Ed. 100 or 280, 181, 182, 187, 188, 201, 207, 241, 242, 244, 245, 330, 341, 344, 375 or 376, 413, 446, 462, 464, 570 or 572.

Physical Education—Dance Emphasis:

Phys. Ed. 180, 181, 182, 183, 187, 188; two of the following courses: 241, 242, 244, 245; three of the following five courses: 280, 281, 282, 283, 284; 285; 287; 288, 330, 341, 380, 387, 388, 413, 446, 484, 485, 487, 488.

Physical Education—Dance, Nonteaching:

Phys. Ed. 181, 182, 183, 187, 188, 280; four courses from 281, 282, 283, 284, 285; and 287, 288, 380, 383, 387, 388, 484, 485, 487, 488.

Prephysical Therapy

Freshman Year			Junior Year		
	F	S		F	S
Relig.	2	2	Relig.	2	2
Eng. composition	3	3	Humanities	2	
Health 130	2		Phys. Ed. 446	2	
Math.	3	5	Phys. Ed. 344	3	
Bact. 121	3		Phys. Ed. 541	2	
Phys. Ed. 231 or 241	1	1	Phys. Ed. 413		2
Zool. 105	3		Phys. Ed. 543		2
Hist. 170		3	Phys. Ed. 182		$\frac{1}{2}$
Psych. 111		3	Phys. Ed. 462	3	
Total Hours	17	17	Phys. Ed. 464		2
			Phys. Ed. 375		2
Sophomore Year			Health 121		2
	F	S	Psych. 185 (or other) ..	3	
Relig.	2	2	Psych. 320, 321, 323,		
Humanities		3	445		2
Eng. lit.		3	Rec. 570		2
Chem.	5		Eng. 216		2
Zool. 261-2	5		Total Hours	17	18 $\frac{1}{2}$
Sociol. 111		3	Total	101 semester hours	
Phys. Ed. 235	1				
Phys. Ed. 181	$\frac{1}{2}$				
Phys. Ed. 330		3			
Phys. Ed. 341		3			
Physics 105	3				
Total Hours	16 $\frac{1}{2}$	17			

Upon completion of the above courses, prephysical therapy majors will be eligible for affiliation with an accredited school of physical therapy. Upon comple-

tion of physical therapy work credit may be transferred to B.Y.U. for graduation with a B.S. degree. Any substitution for any courses must be done with the approval of the department chairman.

Minor Requirements

Physical Education—Men

All minor students should register through the director of Undergraduate Professional Programs of the Department of Physical Education—Men.

Phys. Ed. 181, 182; four hours from 231, 232, 233, 234, 235, 236; 280; four hours from 371, 372, 373, 374. Also, 330, 341*, 344, and 375 or 376.

Physical Education—Women

Phys. Ed. 181, 182, 187, 188; three courses from 241, 242, 244, 245, 330, 341*, and 375 or 376.

Dance, Nonteaching

Phys. Ed. 180, 181, 182, 183, 187, 188, 287, 288, 380, 383, 384, 387, 388, 484, 485, 487, 488.

The department reserves the right to recommend substitutes for any of the above required courses.

Physical Education Minor for Elementary Education

Students majoring in elementary education who desire to elect a teaching minor in physical education will take the following courses:

14½-hour list—men: Phys. Ed. 180, 201, 231, 232, 233, 235, 330, 514, and Health 380, 521.

15-hour List—women: Phys. Ed. 164 or 165, 180, 201, 242, 244, 330, 514, and Health 380, 521.

***Note:** Zool. 261 and 262 are prerequisites for Phys. Ed. 341.

All courses in the one hundred series count for general education credit in physical education.

Courses

- | | |
|--|-----------------|
| 101, 102. Freshman Activities. (½:0:2-3 ea.) F.S. | Staff |
| Games, sports and related conditioning activities. | |
| 104. Recreational Sports. (½:0:2-3) F.S.Su. | Parry, Hafen |
| Individual, dual, and group games and sports. | |
| Activities providing opportunity for ready development of skill and strategy for recreational satisfaction. | |
| 110. Fencing, Beginning. (½:0:2-3) F.S. | Parry, deHoyos |
| Equipment is furnished by the University. | |
| 113. Wrestling, Beginning. (½:0:2) F.S. | Staff |
| 114. Wrestling, Intermediate. (½:0:2) F.S. | Staff |
| Prerequisite: Phys. Ed. 113 or equivalent. | |
| 115. Squash, Beginning. (½:0:2-3) F.S. | Staff |
| 117. Paddleball, Beginning. (½:0:2-3) F.S. | Staff |
| 119. Handball, Beginning. (½:0:2-3) F.S. | Staff |
| 121. Track and Field, Beginning. (½:0:2) F. | Robison, James |
| 122. Track and Field, Intermediate. (½:0:2) S. | Robison, James |
| 123. Badminton, Beginning. (½:0:2) F.S.Su. | Rigby, Soffe |
| 126. Archery, Beginning. (½:0:2-3) F.S.Su. | Hafen, Jacobson |
| Individual techniques with various types of tournaments and related archery activities. Student furnishes arrows, bow string, and finger tabs. | |

128. **Bowling, Beginning.** ($\frac{1}{2}$:0:5) F.S.Su. fee. Anderson, Dixon
Student pays for lines.
131. **Golf, Beginning.** ($\frac{1}{2}$:0:2) F.S.Su. Tucker
Equipment furnished by the University.
132. **Golf, Intermediate.** ($\frac{1}{2}$:0:2) F.S.Su. Prerequisite: Phys. Ed. 131 or equivalent. Tucker
Equipment is furnished by the University.
133. **Tennis, Beginning.** ($\frac{1}{2}$:0:2) F.S.Su. Dixon, Hawkes
Student furnishes racket and balls.
134. **Tennis, Intermediate.** ($\frac{1}{2}$:0:2) F.S.Su. Prerequisite: Phys. Ed. 133 or equivalent. Dixon, Hawkes
Student furnishes racket and balls.
135. **Rugby, Beginning.** ($\frac{1}{2}$:0:2-3) Staff
137. **Hiking.** ($\frac{1}{2}$:0:3-5) F.S.Su. Hafen, Holbrook
Hikes in the surrounding areas graded according to length and difficulty include related observations and study. Fee. (Permission to withdraw with refund restricted.)
140. **Basketball, Beginning.** ($\frac{1}{2}$:0:2) F.S. Wallace, Witbeck
141. **Basketball, Intermediate.** ($\frac{1}{2}$:0:2) F.S. Prerequisite: Phys. Ed. 140 or equivalent. Bunker
142. **Speedball, Beginning.** ($\frac{1}{2}$:0:2-3) F.S. Staff
144. **Volleyball, Beginning.** ($\frac{1}{2}$:0:2) F.S.Su. Geddes, Soffe, Wallace
147. **Soccer, Beginning.** ($\frac{1}{2}$:0:2-3) F.S. Jones, Wallace
148. **Soccer, Intermediate.** ($\frac{1}{2}$:0:2-3) F.S. Staff
149. **Field Sports.** ($\frac{1}{2}$:0:2-3) F.S. Wallace
152. **Softball.** ($\frac{1}{2}$:0:2-3) F. Parry
154. **Football, Beginning.** ($\frac{1}{2}$:0:5) F. Tuckett
Limited to those qualifying for freshman football squad.
155. **Football, Intermediate.** ($\frac{1}{2}$:0:5) F. Hudspeth
Limited to varsity football players.
156. **Baseball, Beginning.** ($\frac{1}{2}$:0:5) F.S. Tuckett
Limited to those qualifying for freshman baseball squad.
157. **Baseball, Intermediate.** ($\frac{1}{2}$:0:5) S. Tuckett
Limited to varsity baseball players.
160. **Swimming, Beginning.** ($\frac{1}{2}$:0:2-3) S. Hirst, Uibel, Wallace
Beginning swimming techniques to provide a foundation for skill, safety, and enjoyment of water activities. Fee. (Permission to withdraw with refund restricted.)
161. **Swimming, Intermediate.** ($\frac{1}{2}$:0:2-3) S. Prerequisite: Phys. Ed. 160 or equivalent. Rigby, Wallace, Uibel
Swimming skills including strokes, diving, and synchronizing. Fee. (Permission to withdraw with refund restricted.)
164. **Life Saving.** ($\frac{1}{2}$:0:3) S. Hirst, Uibel, Wallace
American Red Cross senior life saving course. Fee.
165. **Water Safety Instruction.** ($\frac{1}{2}$:0:3) S. Prerequisite: Phys Ed. 164 or equivalent. Hirst, Uibel, Wallace
American Red Cross course. Fee.

166. **Canoeing.** (½:0:4) F.S.Su. Prerequisite: ability to pass swimming test.
Hirst, Holbrook, Wallace
Instruction in canoeing techniques on the varied waterways of Utah County. American Red Cross basic canoeing and instructors cards issued to qualifying students. Fee. (Permission to withdraw with refund restricted.)
170. **Tumbling.** (½:0:2-3) F.S.Su. Parry, Wallace
171. **Trampoline and Tumbling.** (½:0:2) F.S. Moe, Wallace
173. **Trampoline - Gymnastics, Beginning.** (½:0:2) F.S. Moe
Basic instruction in gymnastics and free exercises and trampoline; techniques in use of apparatus and equipment.
174. **Trampoline - Gymnastics, Intermediate.** (½:0:2) F.S. Prerequisite: Phys. Ed. 173 or equivalent. Moe
175. **Preventive and Remedial Activities.** (½:0:2) F.S.Su. Prerequisite: permission of instructor or referral by Health Center. Staff
A fundamental body mechanics, posture, and corrective exercise program.
176. **Activities for Fitness.** (½:0:2-3) F.S.Su. Parry, Wallace
Sequential and progressive exercises and game activities for general fitness. Balance, skill, flexibility and other factors are developed.
177. **Principles and Methods of Body Mechanics.** (½:0:2-3) F.S.Su. Staff
178. **Progressive Weight Training, Beginning.** (½:0:2-3) F.S.Su. Staff
80. **Social Dance.** (½:0:2-3) F.S.Su. Anderson, Vernon, A. Heaton, Oliphant
81. **Folk Dance.** (½:0:2-3) F.S.Su. Vernon, Anderson, Jensen, Oliphant
82. **Square Dance.** (½:0:2-3) F.S.Su. A. Heaton, Jensen
83. **Specialty Dance.** (½:0:2-3) F.S. Staff
Combined or emphasized forms of dance to meet special individual and group needs for program performances.
84. **National Dance Forms.** (½:0:2-3) F.S.Su. Anderson
Vigorous American and foreign dance forms with their application and organization with folk and square sequences.
85. **Ballet Technique, Beginning.** (½:0:2-3) F. Staff
86. **Ballet Technique, Intermediate.** (½:0:2-3) Staff
87. **Modern Dance Technique, Beginning.** (½:0:2-3) F.S.Su. Oliphant, Vernon, Yerg
Fundamental techniques of movement with emphasis on basic and combination steps and folk forms.
88. **Modern Dance Technique, Intermediate.** (½:0:2-3) F.S. Prerequisite: Phys. Ed. 187. Oliphant, Vernon, Yerg
Fundamental techniques of movement with emphasis on qualities of movement, spatial elements and rhythm.
92. **Outing Activities.** (½:0:3-5) F.S.Su. Michaelis, Uibel
Selected seasonal activities which may include walking, nature observation and study, horseback riding, snowshoeing, coasting, bicycling, roller skating, canoeing, sleighing, ice skating, tracking and trailing, and outdoor cookery.
95. **Skiing, Beginning.** (½:0:5) F.S. Jacobson, Uibel, Tucker
First year skiing for participants of varying abilities. Sections formed on the basis of ability, with instruction suited to varying skill levels in fundamentals of skiing. The student furnishes his ski equipment and pays ski tow fees. Fee. (Permission to withdraw with refund restricted.)

196. **Skiing, Intermediate.** ($\frac{1}{2}$:0:5) F.S. Jacobson, Uibel, Tucker
Second year skiing for participants of varying abilities. Classification for instruction based upon ability. The student furnishes all his ski equipment and pays ski tow fees. Fee. (Permission to withdraw with refund restricted.)
201. **Introduction to Physical Education.** (1:1:0) F.S. Hirst, Moe, Soffe
207. **Sports Officiating.** (2:1:3) F. Wallace
Rules, techniques, problems, and procedures in officiating softball, volleyball, and basketball. National ratings may be obtained by passing the WNORC examinations.
231. **Sports Fundamentals for Majors.** (1:0:3) F.S. Bunker, Roundy
Flag football, soccer.
232. **Sports Fundamentals for Majors.** (1:0:3) F.S. Bangerter, Moe
Gymnastics, tumbling.
233. **Sports Fundamentals for Majors.** (1:0:3) F.S. Jones, Soffe
Archery, badminton.
234. **Sports Fundamentals for Majors.** (1:0:3) F.S. Geddes, Tucker
Volleyball, golf.
235. **Sports Fundamentals for Majors.** (1:0:3) S. Uibel
Swimming.
236. **Sports Fundamentals for Majors.** (1:0:3) F.S. Jones, Uibel
Tennis, weight training.
241. **Skills and Teaching Techniques.** (2:0:4) F. Wallace
Soccer, speedball, volleyball, trampoline, and marching.
242. **Skills and Teaching Techniques.** (2:0:4) S. Wallace
Tumbling, body mechanics, outdoor games, track and field, and softball.
244. **Skills and Teaching Techniques.** (2:0:4) F. Hirst
Hockey, badminton, basketball, and activities calling for coordination, balance, flexibility, agility, and timing.
245. **Skills and Teaching Techniques.** (2:0:4) S. Hirst
Archery, golf, bowling, rope jumping, and recreational sports.
250. **Ski Instruction Methods.** (1:0:4) F. Uibel
Instruction course in skiing for those who wish to qualify as student instructors in the ski program.
280. **Social Dance Teaching Techniques.** (1:0:2-3) F.S.Su. Prerequisite: Phys. Ed. 180 A. Heaton
281. **Square Dance Teaching and Calling Techniques.** (1:0:3) F. Prerequisite: a course of thorough performance and knowledge of square dance. Jensen
Analysis of dance forms, their presentation for ready learning with study and laboratory experience in square dance teaching and calling.
282. **Square Dance, Advanced.** (1:0:2-3) F.S. Jensen
283. **Social Dance, Advanced.** (1:0:2-3) F.S. A. Heaton
284. **Folk Dance, Advanced.** (1:0:2-3) F.S. Jensen
285. **Latin American Dance.** (1:0:2-3) F.S. A. Heaton
287. **Modern Dance Composition.** (1:0:4) F. Prerequisites: Phys. Ed. 187, 188. Vernon
Fundamental compositional forms with emphasis on locomotor movements and spatial elements.

288. **Modern Dance Composition.** (1:0:4) S. Prerequisite: Phys. Ed. 287. Vernon
Fundamental compositional forms with emphasis on the qualities of movement, rhythm, structural and spatial elements and ideational and sensory stimuli.
330. **Principles of Physical Education.** (3:3:0) F.S. Holbrook
The principles of physical education and the relationship of physical education to total education.
341. **General Kinesiology.** (3:3:0) F.S. Prerequisite: Zool. 261 and 262 or equivalent. Bangerter
344. **Physiology of Activity.** (3:3:0) Prerequisite: a course in applied human anatomy and physiology. Geddes
371. **Football Fundamentals and Coaching.** (2:1:2) F.S. Hudspeth
372. **Basketball Fundamentals and Coaching.** (2:1:2) F.S. Watts
Theory and fundamentals of offensive and defensive systems, and schedule making.
373. **Track and Field Fundamentals and Coaching.** (2:1:2) F.S. Robison
Theory, fundamentals, and techniques of track and field athletics with some emphasis on management of meets.
374. **Baseball Fundamentals and Coaching.** (2:1:2) F.S. Tuckett
Theory, fundamentals, problems, and techniques of baseball with some consideration of team tactics, rules, and conditioning.
375. **Physical Education for Teachers of Primary Grades.** (2:0:4) F.S.Su. Jacobson, Michaelis
Analysis of the fundamentals, the development of skills, and the application of methods in the teaching of games, rhythms, and recreation activities for grades 1, 2, and 3.
376. **Physical Education for Teachers of Intermediate Grades.** (2:0:4) F.S.Su. Hirst, Michaelis
Analysis of fundamentals and development of skills for teaching in games, rhythms, and recreation activities for grades 4, 5, and 6.
377. **Secondary Teaching Methods and Procedures.** (3:3:1) F.S. Prerequisite: Tchr. Ed. 301. See Tchr. Ed. 377 for description. Bangerter
378. **Physical Education Practicum.** (1:0:2-3) Staff
380. **Modern Dance Production.** (2:3:0) F. Prerequisites: Phys. Ed. 287, 288. Vernon
Organization and direction of finished productions, including costumes, makeup, music, scenery, lights and publicity.
383. **Rhythmic Analysis and Accompaniment.** (2:5:0) S. Staff
The analysis of rhythm, its relationship to movement, and its forms of sound and musical accompaniment.
387. **Modern Dance Technique, Advanced.** (1:0:6) F. Prerequisite: Phys. Ed. 187, 188. Yerg
388. **Modern Dance Technique, Advanced.** (1:0:6) S. Prerequisites: Phys. Ed. 187, 188, 387, or equivalent. Yerg
406. **Sports Officiating.** (2:2:1) F.S. Soffe
Rules, techniques, problems, and procedures in officiating football, basketball, and other team and individual sports. Suggested for those desiring to officiate in the intramural program.
413. **Organization and Administration of Physical Education.** (2:2:0) Home Study also. F.S. Prerequisite: Phys. Ed. 330. Hartvigsen
Administrative problems arising out of organizing and conducting health, physical education, and recreation programs in schools and communities.

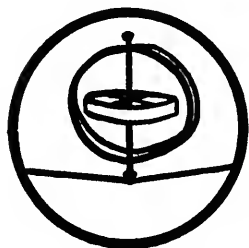
446. **Adaptation of Activities in Corrective Procedure.** (2:1:3) F.S. Prerequisites: Zool. 261 and 262 or equivalent; Phys. Ed. 341. Call
The selection and scope of corrective activities, forces and mechanics in body balance, variations of posture, methods of stimulating interest in posture, and the psychology of individual gymnastics.
462. **Elementary Statistics for Health and Physical Education.** (3:3:0) F.S.Su. Prerequisite: Math. 110 or equivalent. Hart
Counts toward 9-hour science group requirement.
464. **Introduction to Tests in Health and Physical Education.** (2:2:0) F.S.Su. Prerequisite: Phys. Ed. 462. Hart
Introduction to the history and development of measurement in health and physical education. Description of important tests in these areas with emphasis on techniques of test administration and application of results.
479. **Secondary Student Teaching.** (8:1:15) F.S. Staff
For description and fees see Tchr. Ed. 479.
484. **Philosophy and Principles of Dance.** (2:3:0) S. (Offered 1965-66) Yerg
Theories and philosophies of contemporary dance and dancers and the significance of these ideas in view of their effect on modern educational and cultural uses of dance.
485. **History of Dance.** (2:3:2) F. Prerequisites: Phys. Ed. 187, 188, 387, 388. Yerg
Beliefs in and practices of various forms of dance from early to modern times.
487. **Modern Dance Improvisation.** (1:0:4) F. Oliphant
Exploration and experimentation with techniques and composition.
488. **Modern Dance Improvisation.** (1:0:4) S. Oliphant
511. **Administration of High School Athletics.** (2:2:0) F. Staff
Education outcomes of high school activities, their relationship to the intramural program, the physical education program, the school, and the community as a whole.
514. **Organization and Administration of Intramural Sports.** (2:2:0) F. Home Study also. Naylor
History, present status, and objectives of the intramural movement procedures concerning organization, administration, and supervision of the intramural program.
541. **Diagnosis and Management of Athletic Injuries.** (2:2:0) F.S. Call
543. **Problems in Athletic Conditioning and Injuries.** (2:1:2) F. Prerequisites: Phys. Ed. 341, 446, 541. Fee. Call
570. **Teaching Progression in Individual Sports.** (2:4:0) S. Prerequisites: skills classes or equivalent. Jacobson, Jones
Materials, methods, and teaching progression in individual sports such as archery, badminton, bowling, golf, and tennis.
571. **Teaching Progression in Team Sports—Men.** (2:1:2) F. Jones
Materials, methods, and teaching progression in team sports such as basketball, football, soccer, softball, speedball, volleyball, and wrestling.
572. **Teaching Progression in Team Sports—Women.** (2:2:2) F.S. Hirst
Materials, methods, and teaching progression in team sports such as basketball, field hockey, soccer, softball, speedball, and volleyball.
574. **Teaching Techniques in Gymnastics.** (2:1:2) F. Bangerter, Moe
575. **Materials and Methods for Secondary Teachers.** (2:1:2) F. Hirst

- 588. Workshop in Modern Dance.** (2:2:6) Su. Prerequisite: competency in modern dance. Holbrook, Yerg
Advanced techniques, composition, improvisation, and accompaniment.
- 600. Curriculum Construction and Supervision in Physical Education.** (3:3:0) S. Hart
Curriculum construction for elementary, secondary, and college physical education with techniques of supervision in improving teacher-pupil learning situations.
- 603. Planning Facilities.** (2:2:0) S. E. R. Kimball
Basic planning of facilities for school and community physical education and recreation programs.
- 621. History and Philosophy.** (3:3:0) S. Holbrook
Beliefs and practices from early to modern times as related to physical education. Significance and implications of these in view of their effect upon modern educational thinking and cultural uses.
- 641. Principles and Practices of Physical Reconditioning.** (2:2:0) F. Prerequisite: Zool. 261 and 262; Phys. Ed. 341, 344. Call
- 660. Measurement and Evaluation in Physical Education and Health Education.** (3:3:0) S. Prerequisite: Phys. Ed. 464 or equivalent. Hart
- 673. Physical Education in the Elementary School.** (3:3:0) Su. Holbrook
For the teacher, the principal, and the supervisor. Emphasis on objectives, interrelationships with the curriculum, and the content material used in accomplishing educational results.
- **691. Seminar in Administration and Public Relations.** (3:3:0) S. Hartvigsen
- **692. Research Methods in Physical Education.** (3:3:0) F. Geddes
- **694. Seminar in Readings.** (2:2:0) F.S. Staff
- **696. Seminar in Problems.** (1:1:0) S. Staff
- **698. Field Project, Master's Degree.** (1-6:0:Arr.) F.S.Su. Staff
- 699. Thesis for Master's Degree.** (1-6:0:Arr.) F.S.Su. Staff



Weightlifting—one of many areas of physical development and activity at B.Y.U.

Physical Science



Associate

Professor: Compton (coordinator, 254-D ESC).

Assistant

Professor: Gee.

Instructors: Wickes.

(An interdepartmental area only)

Courses

377. Secondary Teaching Procedures. (3:3:1) F.S. Prerequisite: Tchr. Ed. 301.
Staff

For course description and fees, see Tchr. Ed. 377.

479. Secondary Student Teaching. (5-8:1:25-40) F.S. Prerequisite: Phys. Sci.
377 or equivalent. Compton, Wickes

For course description and fees, see Tchr. Ed. 479.

☐ **Education 493, 494. Independent Reading.** (1-2:0:Arr.)

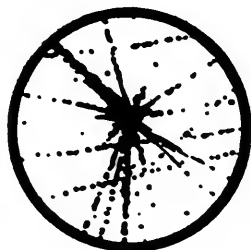
☐ **Education 670. Teaching Mathematics and Science in Secondary Schools.** (2:2:0)

Physics

Professors: J. H. Gardner (chairman, 287 ESC),
Eastmond, Fletcher, W. Hales, A.
Hill, McNamara.

**Associate
Professors:** Barnett, Decker, Dixon, Dudley,
A. L. Gardner, M. Hill, Nelson,
Vanfleet.

**Assistant
Professors:** Ballif, Dibble, Geertsen, Hansen,
Larson, Miller.



The curriculum of the Department of Physics is designed to provide (1) training for students who intend to pursue graduate work in physics or astronomy; (2) preparation for students who intend to enter industrial or governmental service as junior physicists or astronomers; (3) a fundamental background for other physical sciences and engineering; (4) the broadening program required by the biological science, premedical, pre dental, and nursing programs; (5) training in the subject matter of physics for prospective teachers of the physical sciences; and (6) a perspective of science and introduction to various topics in physics for all nonscientist students in the University.

Students who expect to major in physics, other physical sciences or engineering should begin their study of physics by electing Physics 211 and 212. Those who expect to study medicine, dentistry, or to major in the fields of biological sciences may elect Physics 201, 202, and 303.

Nonscience students may elect with profit Physics 100, 127, 137, or 177, any one of which may be taken without prerequisites and which are organized with the object of giving the student an appreciation for his physical environment.

Successful completion of Math. 213, Physics 211 and 213 or their equivalents are prerequisite to all courses above 310.

Students expecting to use physics as a teaching major or minor or as a part of a composite teaching major should refer to the part of this catalog concerned with the subject matter preparation of secondary school teachers.

Requirements for Physics Major

The Physics Department offers a program leading to the Bachelor of Science degree. For entrance requirements to the College of Physical and Engineering Sciences, see that section of this catalog. For a student to graduate with a major in physics, he must successfully complete the following courses: Physics 211, 212, 213, 214, 315; 316, 321, 322, 341, 342, and six or more credit hours selected from the 300, 400, or 500 series in the department (excluding Physics 300); and Math. 112, 213, 317, 334, 336 or equivalent. Successful completion of these courses implies, for physics majors, attaining a grade of "C" or better.

Physics-Astronomy Option

Physics majors whose primary interest is astronomy or astrophysics must take the same basic courses listed under the requirements for physics major. It is recommended that these students take Physics 127 in place of Chem. 106 during the freshman year. They must also include Physics 521, 522 and Physics 527, 528 as part of their program in the senior year.

Suggested Courses for Physics Major

Language. The student is strongly urged to achieve competence in a foreign language (German, Russian, or French) during his undergraduate career. To expedite this goal, certain courses which do double duty in providing language

training and in filling general education requirements are available and should be considered in the elective part of the program.

Religion. It is suggested that the student take advantage of the opportunity to replace a two-hour religion course during his junior or senior year by two hours of credit for devotional assembly.

Mathematics. Students in physics should take mathematics the first semester of the freshman year. The course with which one begins his training in mathematics is determined by the results of the mathematical placement test taken prior to registration. Normally the student will begin with Math. 111, but superior mathematics preparation in high school may enable him to begin with Math. 112. In the latter case he should follow the mathematics sequence listed in parentheses in the following proposed program.

Proposed Program. The following program is recommended in order for the student to satisfy the general education requirements and at the same time obtain sufficient understanding in undergraduate physics for a career in physics or to make the pursuit of graduate work profitable.

Freshman Year			Junior Year		
	F	S		F	S
Math. 111, 112	5	5	Math. 334, 336	3	3
(Math. 112, 213)			Physics 315, 341	3	4
Chem. 105, 106*	4	4	Physics 316	2	
Eng.	3	3	Physics 321, 322	4	4
Relig.	2	2	Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Electives	4	5
Health 130	2				
Hist.		3	Total Hours	18	18
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$			
			Senior Year		
Total Hours	17	18		F	S
Sophomore Year			Math. 541,* 542*	3	3
	F	S	Physics 441*, 471*	5	4
Math. 213, 317	5	3	Physics 342, 431	4	3
(Math. 334, 317)			Physics 551, 552	3	3
Physics 211, 213	4	4	Relig.	2	
Physics 212, 214	1	1	Electives	2	4
Relig.	2	2			
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Total Hours	18	18
Electives	5	7			
Dev. assy.	$\frac{1}{2}$	$\frac{1}{2}$			
Total Hours	18	18			

*Physics-astronomy majors should substitute Physics 127, 521, 522, 527 and 528 for these courses.

Note: Of the general requirements, physical science, religion, English composition, health, and American history are specifically listed in this program. This leaves 19 hours of general education requirements to include in the 28 hours available for electives.

Physics Minor

Any course in the Physics Department curriculum which is passed with a grade of "C" or better may be counted towards filling the 14-hour requirement for a minor in physics. A recommended program for the physics minor is Physics 211, 212, 213, 214, 315 and 316.

Courses

100. Essentials of Physics. (3:3:0) F.S.Su. Home Study also. (G-PS m) Staff
An introductory course designed for students not majoring in the physical sciences. Basic concepts are treated from a nontechnical point of view.

- 105, 106. Technical Physics.** (3:2:3 ea.) F.S. (G-PS m) Prerequisite: completion of or concurrent registration in Math. 111 or 121. Staff
Introductory course in applied physics with special emphasis on industrial and technical applications. Topics include mechanics, heat, light, and sound.
- 127. Descriptive Astronomy.** (3:3:0) F.S.Su. Home Study also. (G-PS m) Staff
A nonmathematical presentation of our knowledge of the content and history of the universe. Frequent use is made of observatory and planetarium.
- 137. Weather and Climate.** (3:3:0) F.S.Su. Home Study also. (G-PS m) W. Hales
The earth's atmosphere and problems associated with climate and weather forecasting.
- 177. Physics of Light and Photography.** (3:2:3) F.S. Home Study also. (G-PS m) W. Hales
Fundamentals of light phenomena with applications to photography.
- 201, 202. General College Physics.** (4:3:3 ea.) F.S. (G-PS m) Prerequisite: Math. 111 or equivalent. Staff
A general course with laboratory for students in premedical, pre dental, and biological science programs.
- 211, 213. General Physics: Classical.** (4:4:0 ea.) F.S.Su. (G-PS m) Prerequisites: Math. 112; completion of or concurrent registration in Math. 213; and for physics, chemistry, and engineering majors, completion of or concurrent registration in Physics 212 or 214. Staff
Mechanics, heat, sound, light, electricity, and magnetism for physical science and engineering majors. This course is a prerequisite for all specialized courses in physics.
- 212, 214. General Physics Laboratory.** (1:0:3 ea.) F.S.Su. (G-PS m) Prerequisite: completion of or concurrent registration in Physics 211 or 213. Staff
Experimental work to parallel Physics 211 or 213.
- 300. Philosophical Foundations of Modern Physics.** (3:3:0) F.S. (m) Staff
Selected topics in modern physics, e.g. relativity and quantum mechanics, will be briefly developed and examined for their philosophical implications. Some current challenging problems will be explored.
- 303. Survey of Atomic and Nuclear Physics.** (3:3:0) S. (m) Prerequisites: Physics 201, 202 or 211, 213. Staff
Primarily for nonphysical science majors. Elementary particle and radiation physics including atomic structure, spectra, X rays, nuclear structure, nuclear processes, and applications.
- 315. General Physics: Atomic and Nuclear.** (3:3:0) F.S.Su. (m) Staff
Fundamental particles, atomic and molecular structure, Bohr theory, spectra, X rays, quantum effects, special relativity, radioactivity, nuclear forces and nuclear reactions.
- 316. Atomic and Nuclear Physics Laboratory.** (2:1:4) F.S.Su. (m) Prerequisite: completion of or concurrent registration in Physics 315. Staff
Required of all physics majors. Experimental work in particle and radiation physics.
- 321, 322. Mechanics.** (4:4:0 ea.) F.S. (m) Prerequisite: Math. 317. Dudley
Methods of classical mechanics applied to equilibrium, particle motion, central forces, small oscillations, conservation principles, and rigid body dynamics, with an introduction to Lagrange's equations.
- 341, 342. Electricity and Magnetism.** (4:3:3 ea.) F.S. (m) Prerequisite: Math. 317. Vanfleet
Classical theory of electricity and magnetism developed from its experimental foundations. Electrostatics, magnetostatics, currents and their associated fields, circuit theory, and an introduction to Maxwell's equations.

- 391, 392. **Seminar in Current Physics.** (1:1:0 ea.) F.S. Prerequisite: consent of instructor. Staff
For junior physics majors enrolled in the Honors Program.
431. **Thermodynamics and Kinetic Theory.** (3:3:0) S. (m) Prerequisites: Physics 211, 213. Staff
Classical thermodynamics with applications, introduction to kinetic theory, and classical and quantum statistical mechanics.
441. **Electronics for Physicists.** (5:3:6) F. (m) Prerequisite: Physics 431. Dixon
Fundamental concepts of electronics and basic circuitry with emphasis on the tools needed for specialized research in a variety of fields of physics.
471. **Optics and Electromagnetic Theory.** (4:3:3) S. (m) Prerequisites: Physics 342, Math. 334, or consent of instructor. Barnett, Eastmond
Intermediate theoretical and experimental optics with introduction to the use of Maxwell's equations in the propagation, reflection, refraction, interference, and diffraction of electromagnetic waves.
- 497A,B,C. **Introduction to Research.** (1-3:0:2-6 ea.) Arr. (m) Staff
511. **Introduction to Theoretical Physics.** (3:3:0) Su. Prerequisites: Math. 334, 317, or consent of instructor. Staff
Introduction to basic principles of physics with emphasis on their mathematical formulation. Topics treated vary from year to year.
- 513A,B,C,D. **Special Topics in Contemporary Physics.** (1-3:1-3:0 ea.) Arr. Prerequisite: consent of instructor. Staff
Various contemporary topics in physics are treated on sufficient demand.
- 521, 522. **Celestial Mechanics.** (3:3:0 ea.) F.S. Prerequisite: consent of instructor. Hansen
Fundamental principles of celestial mechanics and orbital computations.
- 527, 528. **Introduction to Astrophysics.** (3:3:0 ea.) F.S. Prerequisite: consent of instructor. McNamara
Fundamental principles and observational techniques of astrophysics.
551. **Elements of Quantum Theory.** (3:3:0) F. Prerequisites: Physics 315, Math. 317. Staff
Basic course in modern theory of radiation and particle physics including elementary treatments of relativity theory, quantum mechanics with spectroscopic applications, quantum statistics, solids.
552. **The Atomic Nucleus.** (3:3:0) S. Prerequisite: Physics 551. Staff
Basic course in nuclear physics including description of nuclear properties, scattering theory, nuclear reactions, elementary theory of the nucleus.
- 561, 562. **Fundamentals of Acoustics.** (3:3:0 ea.) F.S. (Offered 1964-65 and alternate years.) Staff
Vibrating systems, transmission phenomena, theory of acoustical radiators, and applications of acoustics.
- 563, 564. **Acoustical Measurements.** (2:2:0 ea.) F.S. (Offered 1964-65 and alternate years.) Prerequisite: completion of or concurrent registration in Physics 561 and 562. Staff
Selected experiments in acoustics.
- 611, 612. **Astrophysics.** (3:3:0 ea.) F.S. (Offered 1964-65 and alternate years.) Prerequisite: consent of instructor. Hansen, McNamara
The theory of stellar atmospheres and interstellar matter.
621. **Dynamics.** (3:3:0) F. Prerequisite: Physics 322. Staff

- 623. Dynamics of Continuous Media.** (3:3:0) S. (Offered 1965-66 and alternate years.) Prerequisite: Physics 621. Staff
- 625. Theory of Relativity.** (3:3:0) S. (Offered 1964-65 and alternate years.) Prerequisite: Physics 621. Staff
- 627, 628. Advanced Topics in Astrophysics.** (3:3:0 ea.) F.S. (Offered 1965-66 and alternate years.) Prerequisite: consent of instructor. McNamara
- 631. Advanced Thermodynamics and Kinetic Theory.** (3:3:0) F. (Offered 1965-66 and alternate years.) Decker
- 632. Statistical Mechanics.** (3:3:0) S. (Offered 1965-66 and alternate years.) Decker
- 641, 642. Mathematical Theory of Electricity and Magnetism.** (3:3:0 ea.) F.S. Prerequisite: Physics 342. Vanfleet
- 645, 646. Plasma Physics.** (3:3:0 ea.) F.S. (Offered 1964-65 and alternate years.) Prerequisites: Physics 431, 621, 642. Staff
A study of the plasma state of matter, including a description both in terms of individual particles and in terms of a fluid, with applications.
- 651, 652. Quantum Mechanics.** (3:3:0 ea.) Prerequisites: Physics 551, 621; Math. 618. Nelson
- 655, 656. Nuclear Physics.** (3:3:0 ea.) F.S. (Offered 1965-66 and alternate years.) Prerequisite: Physics 552. Dixon
- 671. Atomic Spectroscopy.** (3:2:3) F. (Offered 1964-65 and alternate years.) Prerequisite: Physics 551 or consent of instructor. Eastmond
- 672. Molecular Spectroscopy.** (3:2:3) S. (Offered 1964-65 and alternate years.) Prerequisite: Physics 671. Eastmond
- 681, 682. Modern Theory of the Solid State.** (3:3:0 ea.) F.S. Prerequisites: Physics 431, 551. Decker
- 691, 692. Seminar.** (1:1:0 ea.) F.S. Staff
- 697. Research for Master's Degree.** (Arr.) Arr. Staff
- 699. Thesis for Master's Degree.** (1-6:Arr.:Arr.) Arr. Staff
- 711A,B,C. Advanced Topics in Physics.** (1-3:1-3:0 ea.) F.S. Prerequisite: consent of instructor. Staff
Course content varies from year to year. Special topics in theoretical and experimental physics are treated.
- 751, 752. Advanced Quantum Theory.** (3:3:0 ea.) F.S. (Offered 1965-66 and alternate years.) Prerequisite: Physics 652 or consent of instructor. Dibble
- 791, 792. Seminar.** (1:1:0 ea.) F.S. Staff
- 797. Research for Ph.D. Degree.** (Arr.) Arr. Staff
- 799. Dissertation for Ph.D. Degree.** (Arr.) Arr. Staff

Political Science



Professors: Reeder (chairman, 358 McKay), Bernhard, Grow.

Associate Professors: Cannon, Mabey, Melville.

Assistant Professors: Hillam, Midgley, Morrell, Williams.

Instructors: Hart*, Snow.

Requirements for a Major in Political Science

A major in political science requires the satisfactory conclusion of at least thirty hours of work in this field, distributed as follows:

Required courses: Pol. Sci. 110 and 300 (or 500, for P.A. students) and any two of the following: 111, 150, or 170.

Elective courses: At least one course from each of the following six main areas plus additional courses to a minimum total of 30 hours:

1. Political Theory—301, 303, 406, 464, 506, 690.
2. American Government and Politics—310, 320, 321, 510, 691.
3. Public Administration—330, 331, 533, 532, 535, 536, 537, 538, 539, 693.
4. Foreign Government and Politics—350, 352, 355, 356, 357, 358, 695.
5. Public Law—360, 361, 365, 464, 468, 563, 575, 696.
6. International Relations—370, 371, 375, 572, 575, 580, 697.

Political science lower division courses should be completed where possible, by the end of the sophomore year. Courses and sequences other than those required should be selected in consultation with the adviser who will advise the student in the selection of his minor field.

See College of Education for details on political science and teaching programs.

A minor in political science requires 14 hours. Since minors have varied objectives, flexibility is permitted in selecting courses which will be most helpful to each student. Political science faculty members will be happy to assist minors in selecting their courses.

American History and Government Requirement

In satisfying this requirement for graduation, the student majoring in political science is advised to take both Hist. 120 and 121. If this cannot be arranged, he should take at least one of the following combinations:

Pol. Sci. 110 and Hist. 120 or 121, or Pol. Sci. 110 and Econ. 274.

Hist. 170 is not recommended for majors in political science as the means of fulfilling this graduation requirement.

Courses

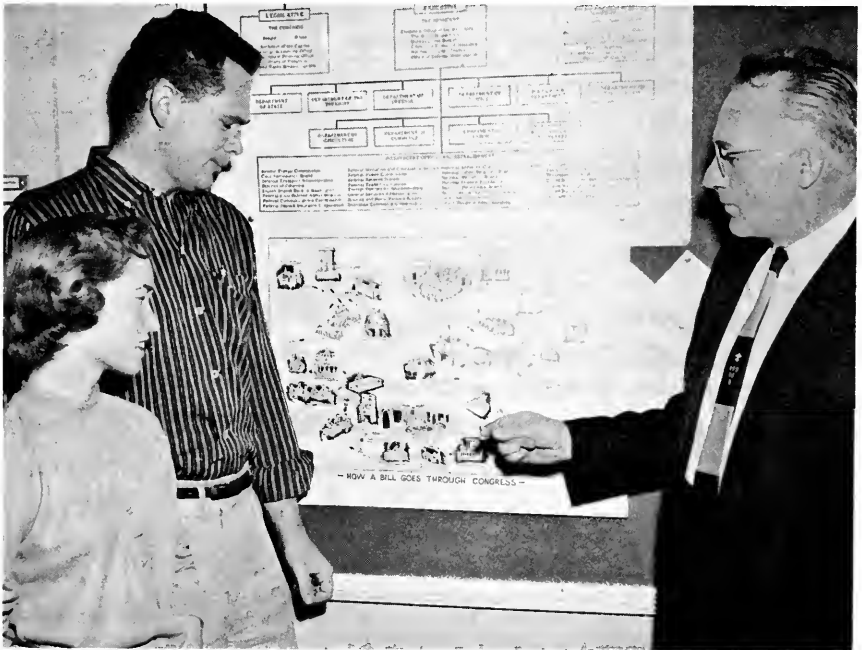
- 105. Current Affairs.** (1:1:0) F. S. (G-SS m) Staff
Survey of current events with special attention to historical background and present implication in economics, sociology, politics, and international relations.

110. **American Government.** (3:3:0) F.S. Home Study also. (G-SS m)
Cannon, Grow, Reeder, Melville, Williams
Origin and growth of federal constitution; constitutional rights of citizens; study of executive, legislative, and judicial departments; and the major critical policy decisions facing government.
111. **State and Local Governments.** (3:3:0) F.S. (G-SS m) Snow, Grow, Williams
Relation of state to the national government; functions and powers of states; types of municipal government and their growth and operation.
150. **Foreign Governments and Politics.** (3:3:0) F.S. Home Study also. (G-SS m)
Mabey, Morrell
General survey of foreign governments and comparative politics.
170. **Introduction to International Relations.** (3:3:0) F.S. Home Study also. (G-SS m) Hillam
Survey of basic forces, practices, and institutions with special attention to foreign policies of major powers and problem areas in international politics.
300. **Research and Writing in Political Science.** (3:2:1) F.S. (m) Staff
Sources, materials, and methods of research and writing in political science. Required of all majors in political science. Should be taken sophomore or junior year.
301. **Ancient Political Philosophy.** (3:3:0) F. (m) Midgley
The history of political philosophy beginning with the pre-Socratics and ending with Hobbes.
303. **Modern Political Philosophy.** (3:3:0) S. (m) Midgley
The history of political philosophy beginning with Hobbes and ending with the recent revival of political philosophy.
310. **Political Parties, Pressure Groups, and Public Opinion in the U.S.** (5:5:0) F. (m) Hart, Grow, Williams, Cannon
Organization and methods of action of political parties and pressure groups. The formulation and determination of public opinion.
320. **American Legislative System.** (3:3:0) S. (m) Bernhard, Cannon
Structure and organization of congressional and state legislative bodies; nature of business transacted and conflict resolution; influences acting upon such bodies; parliamentary procedure.
321. **Political Behavior.** (3:3:0) F.S. (m) Staff
Investigation of psychological and social aspects of politics, including personality factors, the structuring of political beliefs and values, group behavior, leadership, membership, participation, and decision making.
322. **Contemporary Problems.** (2:2:0) F. (m) Staff
Selected topics which involve the formulation of American public policy in the areas of economics, sociology, politics, and international relations.
330. **Introduction to Public Administration.** (3:3:0) F.S. (m) Cannon, Grow, Snow, Williams
Organization and operation of government. Relationship of administration to other branches of government; types of control over administration; central and local government.
331. **Principles of Public Organization and Management.** (3:3:0) S. (m) Snow, Grow, Williams
Departmental organization of public agencies; organization theory and behavior; communications; authority and control; administrative analysis and survey techniques. Emphasis is given to the public setting.

350. **Government of the Soviet Union and Eastern Europe.** (3:3:0) F. (m) Mabey, Morrell
Government of the U.S.S.R. and other eastern European countries; their political institutions and philosophies.
351. **Communist Governments and Politics.** (3:3:0) F.S. (m) Morrell, Mabey
Origin and development of Communist parties and governments in 14 countries and the U.S.A.
352. **Government and Politics of East Asia.** (3:3:0) S. (m) Hillam, Hyer
Analysis of traditional Asian governmental institutions in their historical context with emphasis on the structure and dynamics of modern Far Eastern politics.
355. **Government and Politics of United Kingdom and the Commonwealth.** (3:3:0) F.S. (m) Mabey
Development of the British Constitution; examination of growth of cabinet government; the Crown, Parliament, Civil Service; local and governmental administration; English judicial system, the commonwealth.
356. **Governments of Latin America.** (2:2:0) S. (m) Staff
Growth and political development of countries in the Latin-American area with special reference to Argentina, Brazil, and Mexico.
357. **Government and History of Canada.** (3:3:0) S. (m) Grow
Growth and development of Canada and the operation of her government.
358. **Governments and Politics of Southeast Asia.** (3:3:0) Hillam
Political development of countries in Southeast Asia with special reference to the contemporary scene.
360. **Constitutional Law of the U.S. I.** (3:3:0) S. (m) Prerequisite: Pol. Sci. 110. Reeder
American federal system.
361. **Constitutional Law in the U.S. II.** (3:3:0) S. (m) Reeder
Fundamental rights and immunities.
365. **American Constitutional History.** (3:3:0) F. Home Study also. (m) Pre-requisite: Pol. Sci. 110. Melville
History and development of the Constitution; study of its fundamental provisions, their interpretations and application in the functioning of the American system of government.
370. **Theory of International Politics.** (3:3:0) F. (m) Hillam
Theoretical approaches to international politics and its basic concepts, such as power, interest, decision making, etc.
371. **Development of American Foreign Policy.** (3:3:0) S. Home Study also. (m) Melville, Hillam
Role of the United States in international affairs from colonial times to the present.
375. **International Organization.** (3:3:0) F. (m) Hillam
History and structure of international organizations, with particular emphasis on the United Nations organization and its specialized agencies.
406. **American Political Thought.** (3:3:0) S. Home Study also. (m) Melville
American political and legal ideas from the colonial period to the present, with an analysis of their influence upon development of American history and government.
464. **Jurisprudence.** (3:3:0) S. (m) Reeder, Midgley
Problem approach to ancient and modern legal philosophies, with special attention given the nature of justice and the relation of law to morality.

- 468. Anglo-American Legal Institutions.** (3:3:0) S. (m) Reeder
Origins and development of common law and equity, the writ system, court systems, basic legal terms, and the anatomy of a law suit.
- 498A,B,C. Directed Readings in Political Science.** (Honors) (1-2:0:1-2 ea.) F.S. Staff
(m)
- 500. Research and Writing in Public Administration.** (3:3:0) F.S. Williams
Public administration data, forms and procedures in report writing, research patterns, and production of research reports. Designed for students who have not had Pol. Sci. 300 and who need training in research and writing in public administration, or for students who wish to concentrate in public administration.
- 503. Contemporary Political Philosophy.** (3:3:0) (Offered alternate years.) Midgley
Survey of the attack upon political philosophy by political theorists, and the various attempts to revive it by philosophers and theologians.
- 510. American Political Problems.** (2:2:0) F. Cannon, Grow, Hart, Williams, Bernhard
Intensive study of selected problems relating to the noninstitutional workings of the American political system.
- 532. Public Personnel Administration.** (3:3:0) F. (m) Grow, Williams
Treatment of processes, procedures, controls, and problems of personnel and fiscal administration in executive branches of federal, state, and local governments.
- 533. Budget and Fiscal Administration.** (3:3:0) F. (m) Recommended: Acctg. 201. Snow
The principles involved in governmental budget and fiscal administration. Emphasis is given at national, state, and municipal levels.
- 535. Municipal Government and Administration.** (3:3:0) S. (m) Grow
Growth, development, and organization of cities; relationship of cities to other governments; problems and activities of modern cities.
- 536. City Planning.** (3:3:0) S. (m) Recommended: Pol. Sci. 330, Geog. 522, Sociol. 423. Staff
Basic problems and techniques involved in city planning.
- 537. Public Works and Safety Administration.** (3:3:0) F. (m) Recommended: Pol. Sci. 330; any two of Sociol. 380, 383, 386; Psych. 350. Staff
Basic factors underlying the efficient operation of police and fire and public works departments. Sociological and psychological problems involved; organization patterns, public relations, budget, etc.
- 538. International Project Administration.** (3:3:0) (Offered alternate years.) (m) Recommended: Pol. Sci. 110, 115, 330; Hist. 120, 121. Snow
The administration of United States programs abroad. Problems faced, living conditions, techniques of administration, approaches to education, etc.
- 539. Comparative Public Administration.** (3:3:0) S. (Offered alternate years.) Grow, Williams, Snow
Comparative analysis of various administrative procedures and practices.
- 563. Administrative Law of the U.S.** (3:3:0) F. (m) Reeder
Legal setting for administrative bodies and judicial control of administrative action. Cases in administrative law read and discussed.
- 572. Foreign Policy of Soviet Union and Eastern Europe.** (3:3:0) S (m) Morrell, Mabey
Marxist-Leninist concepts of international politics and their practical application including such issues as the Communist International and "peaceful coexistence."

575. **International Law.** (5:5:0) S. (m) Reeder
Nature and function of international law; recognition, succession, jurisdiction rights, and immunities of states; nationality and jurisdiction over nationals.
580. **International Politics of Asia.** (3:3:0) S. (m) Recommended: Pol. Sci. 115. Hillam
International relations of Asia with emphasis on the problems of imperialism, colonialism, nationalism, and communism.
- 690A,B,C,D. **Seminar in Political Theory.** (1-3:1-3:0) (Offered alternate years.) Melville, Midgley
- 691A,B,C,D. **Seminar in Politics.** (1-3:1-3:0) (Offered yearly.) Cannon, Bernhard, Grow, Hart, Williams
- 693A,B,C,D. **Seminar in Public Administration.** (1-3:1-3:0) (Offered yearly.) Cannon, Grow, Williams, Snow
694. **Project in Public Administration.** (2:0:Arr.) Staff
- 695A,B,C,D. **Seminar in Foreign Governments and Comparative Politics.** (1-3:1-3:0) (Offered alternate years.) Mabey, Morrell
- 696A,B,C,D. **Seminar in Public Law.** (1-3:1-3:0) (Offered alternate years.) Melville, Reeder
- 697A,B,C,D. **Seminar in International Relations.** (1-3:1-3:0) Staff
Hillam, Mabey, Morrell, Reeder
698. **Directed Readings in Political Science.** (1-2:0:1-2) F.S. Staff
699. **Thesis for Master's Degree.** (2-6:0:2-6) F.S. Staff



Professor and students checking legislative procedure

Psychology

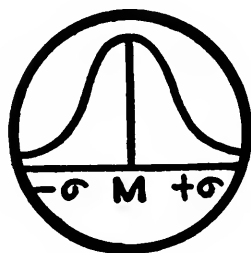
Professors: Howell (chairman, 1230 SFLC), Allen, Hardy, Moffitt, Robinson, Taylor.

Associate Professor: Cooper.

Assistant Professors: Bennion, Cundick, Daniels, Johnson, Payne, Pedersen, Smith.

Instructor: Budge.

Special Instructors: Burnham, Fleming.



The study of psychology should be of value to the general student in the following ways: (1) provide him with a scientific understanding, for its own sake, of behavior and experience; (2) develop insights into his own behavior and that of others, useful in meeting everyday problems of life; (3) assist in cultivating more careful habits of thought concerning human behavior; and (4) enhance his appreciation of people.

The field of psychology offers careers in college teaching (and high school to a lesser degree); various counseling services in elementary and secondary schools; clinical service in clinics, institutions, and private practice; various psychological services in business, industry and government; research in human engineering and most other areas. Most professional fields of psychology require advanced degrees, but there are a limited number of opportunities for those with bachelor's degrees, such as high school teaching, probation and junior level social work, employment interviewing and testing, and junior level psychological testing (psychometry).

The study of psychology also has particular value to students preparing for teaching and counseling of any kind, social work, parenthood, law, medicine, various branches of business, and public administration. Psychology may also be of value in any other specialization concerned with man and his works.

There are two programs for a psychology major: a preprofessional major and a general culture major. The preprofessional major is intended for students who plan to continue with psychology, or certain related fields, as a prospective profession. Students who intend to terminate their formal education with a bachelor's degree would not ordinarily choose this plan.

Preprofessional Major: Those who plan to continue with graduate work in psychology or closely related fields (medicine, counseling, school psychology, psychiatric social work, for example) and who have by the beginning of the junior year an overall grade-point average of 3.00 (with a 3.25 in psychology courses), should choose the preprofessional major. A total of 30 semester hours, including Psych. 111, 360, 365, 370, 374, 378 and one seminar will be required for this major. A maximum of 6 of the 30 hours may be chosen from a selected list of courses in other departments, with the consent of the student's adviser. Courses listed as soc-psych (social psychology) may be used for credit either in sociology or psychology but not in both. Psych. 340 (Mental Hygiene) does not count in the 30-hour requirement.

General Culture Major: The general culture major is designed for students who plan to terminate their formal education at the bachelor's level or those who anticipate entering an advanced field not closely related to professional psychology. The course requirements for the general culture major consist of 30 semester hours, including Psych. 111, 185, 311 (or 360 and 365), 320 or 321, 357 or 350, 450, 460, and one seminar. The remaining hours may be chosen from any other psychology courses or a maximum of 6 of the 30 hours may be chosen from

a selected list of courses in other departments with the consent of the student's adviser. Courses listed a soc-psych (social psychology) may be used for credit either in sociology or psychology but not in both. Psych. 340 (Mental Hygiene) does not count in the 30-hour requirement.

Students planning to terminate with a bachelor's degree should choose a minor area which will broaden their employment opportunities. Suggested areas are secretarial work, various branches of business, recreation, and social work.

To fulfill the additional general education requirements for the baccalaureate degree, a major in psychology may take either twelve hours of a foreign language or nine hours from those courses which have been approved as fulfilling the mathematics, statistics, logic and science courses. If the student elects the latter option, the course work must come from at least two different departments.

For a minor in psychology, the following program is recommended: Psych. 111, 311, and a minimum of eight additional hours chosen from the undergraduate and 500 series courses which are designated with an (m) as fulfilling the minor requirements.

The following graduate programs are offered: a master's degree in general psychology; a master's degree for school psychologists; a Ph.D. in counseling psychology, given in collaboration with the Graduate Department of Education; a Ph.D. in clinical psychology; and a Ph.D. in general psychology. See the Graduate School Catalog for details on these programs.

As part of the training of graduate students, a psychological clinic is maintained by the Psychology Department for the diagnosis and treatment of behavioral and emotional disorders in children and adults. A limited number of selected individuals (other than University students) will be accepted depending on the training needs of the department.

Courses

111. General Psychology. (3:3:0) F.S.Su. Home Study also. (G-SS m) Staff
Foundation course covering essentials of modern scientific psychology. Prerequisite for most upper division psychology classes.

185. Physiological Psychology. (3:3:0) F. (m) Prerequisite: Psych. 111. Staff
Examination of the physiological foundations of behavior and their relation to behavior phenomena. Designed as a second course in psychology to follow Psych. 111.

311. Advanced General Psychology. (3:3:0) F.S. (m) Prerequisite: Psych. 111. Staff
Intensive survey of the general field with special emphasis on topics not covered in detail in Psych. 111. Intended for minors or other advanced students not planning to take Psych. 360, 365, and 378.

320. Psychology of Childhood. (2:2:0) F.S. Home Study also. (G-SS m) Prerequisite: Psych. 111. Budge, Cundick, Taylor
Critical presentation of research on physical, mental, emotional, and social development of the child and his interests, values, and motivations. Primarily for majors and minors.

321. Psychology of Adolescence. (2:2:0) F.S. Home Study also. (G-SS m) Prerequisite: Psych. 111. Budge, Cundick, Taylor
Development and maturation during adolescence, with special attention to research methodology. Programs of sex-social adjustment, independence, vocational adjustment, and emotional and social maturing in our society.

322. Psychology of Adult Life. (2:2:0) S. Home Study also. (G-SS m) Prerequisite: Psych. 111. Taylor
Physiological, intellectual, personality, and motivational changes associated with adulthood; geriatric and gerontological emphasis.

330. Industrial Psychology. (2:2:0) F.S. Home Study also. (m) Prerequisite: Psych. 111. Hardy, Smith
Special application of psychology in human relations program for management. Important issues in relation to motivation, morale, safety, efficiency, etc.

- 336. Personnel Psychology: Theory and Practice.** (2:2:0) F.S. (m) Prerequisite: Psych. 111; Psych. 337 must be taken concurrently. Smith
Employment interviewing techniques; validation of psychological tests, biographical questionnaires.
- 337. Practicum in Personnel Psychology.** (2:1:6) F.S. (m) Prerequisite: Psych. 111; Psych. 336 must be taken concurrently. Burnham
Supervised experience in testing, job analysis, interviewing, and exposure to current personnel programs now in effect. Lecture will cover new material and discuss practicum experience.
- 340. Mental Hygiene.** (2:2:0) F.S. Home Study also. (m) Prerequisite: Psych. 111. Budge, Robinson
Intended to yield insight into prevention and amelioration of mental and personal difficulties.
- 350. (Soc-Psych) Introduction to Social Psychology.** (3:3:0) F.S. Home Study also. (G-SS m) Prerequisite: Psych. 111. or Sociol. 111. Daniels, Dyer, Hardy, Smith
Nature of social influence; socialization; concepts of norm, role status; development of beliefs and attitudes; leadership; and group processes. Applications to prejudice, persuasion, and social control.
- 357. (Soc-Psych) Group Relations and Leadership.** (3:2:2) F.S. (m) Prerequisite: Psych. 111 or Sociol. 111. Dyer, Hardy, Moffitt
Designed to help the individual participate effectively in groups and to assist leaders to become efficient in role performance.
- 360. Sensation and Perception.** (3:3:0) F.S. Prerequisite: Psych. 111. Allen
Sensory mechanisms, sensory dimensions and measurement; theories of organization; perception of space, time, self, persons; relationship between perception, learning, thinking, motivation and personality.
- 362. Cognitive Processes.** (3:3:0) F.S. Prerequisite: Psych. 111. Daniels
A study of thinking, language and thought, concept formation, memory, and the teaching and learning of strategies for synthesis, analysis, and creative problem solving.
- 365. Motivation.** (3:3:0) F.S. Prerequisite: Psych. 111. Hardy
Core course for majors and other advanced students. Theories of motivation; research methods and results; bases of motivation; emotions and motivation; measuring motivation; motivation as related to learning and cognitive processes; and practical implications.
- 370. Elementary Psychological Statistics.** (4:4:0) F.S. (m) Prerequisites: Psych. 111, Math. 105 or equivalent. Staff
Introduction to descriptive and inferential statistics. Measures of central tendency, variability, correlation; sampling theory, tests of significance; and reliability and validity.
- 374. Experimental Psychology.** (3:1:4) F.S. (m) Prerequisites: Psych. 111, 370 or equivalent. Allen, Smith
Psychological methodology and its application to fields of sensation, perception, emotion, learning, motivation and individual differences; conducting and reporting of representative experiments.
- 378. Psychological Tests and Measurement.** (3:3:0) F.S. (m) Prerequisites: Psych. 111, 370. Cooper, Pedersen
Core course for majors, minors, and other advanced students; statistical methodology of assessing and interpreting abilities; tests of abilities and their purposes; and group differences of abilities.
- 445. Exceptional Children.** (2:2:0) S. Home Study also. (m) Prerequisite: Psych. 111. Allen, Cundick, Taylor
Diagnosis of exceptionalities and their psychological significance; gifted, mentally retarded, physically and emotionally handicapped children; and treatment measures. Survey course for students interested in management of children.

- 450. Personality Development.** (3:3:0) F.S.Su. (m) Prerequisite: Psych. 111.
Daniels, Howell, Taylor
Development and organization of personality structure; interaction of biological, psychological, and cultural determinants; and measurement of personality.
- 454. Psychology of Religion.** (2:2:0) S. (m) Prerequisite: Psych. 111.
Allen, Taylor
Classification of religious behavior and experience; sources of religious motivation; religion and the growth process; personality and religious choices; and mental hygiene assets and hazards in religion.
- 460. Principles of Learning.** (3:3:0) F.S. (m) Prerequisite: Psych. 111.
Cooper, Johnson, Taylor
A comprehensive study of the principles of learning; representative experiments; types of learning; principles of effective learning; and implications for clinical, education, and social fields.
- 478. Psychology of Individual Differences.** (3:3:0) F.S. Prerequisite: Psych. 111.
Taylor
Individual differences in human and infra-human species. Constitutional types, sex, age, race, and characteristics.
- 491, 492, 493. Psychology Seminar.** (1:1:0 ea.) F.S.Su. (m) Staff
One seminar required of psychology majors. Reports and discussions of special topics and current psychological literature.
- 495. Independent Readings.** (1-2:Arr.:Arr.) F.S.Su. Prerequisite: consent of instructor.
Staff
- 510. The Psychology of Aesthetics.** (2:2:0) S. (m) Prerequisite: Psych. 111.
Taylor
The arts of perceptual stimuli; the nature of artistic creativity; psychological symbolism expressed in the arts; and the artist as a person.
- 540. Abnormal Psychology.** (3:3:2) S.Su. (m) Prerequisites: Psych. 111, five additional hours in psychology.
Bennion, Howell
Dynamics of maladjustment; implications for normal behavior; review of major and minor psychological disorders; modern therapeutic procedures; and field work at Utah State Hospital.
- 550. Personality Theory.** (3:3:0) F.S.Su. (m) Prerequisites: Psych. 111, 450, and five additional hours in psychology.
Allen, Howell, Taylor
A critical review of the contemporary theories of personality that have been developed within the framework of major psychological systems.
- 555. (Soc-Psych) Group Dynamics.** (2:2:0) F. (m) Prerequisite: Sociol.-Psych. 350.
Hardy, Smith
Research and theories in group dynamics.
- 560. Learning Theory.** (3:3:0) S. (m) Prerequisites: Psych. 111, 460, and five additional hours in psychology.
Allen, Cooper, Taylor
A critical review of current theories of learning and persistent problems.
- 570. Computer Use in Behavioral Sciences.** (3:3:6) S. Prerequisite: Psych. 370 or equivalent.
Carlson
The use of electronic digital computers in the behavioral sciences.
- 574. Advanced Experimental Psychology.** (2:1:5) S. (m) Prerequisites: Psych. 111, 374 or equivalent.
Allen
Principles of instrumentation; varieties of experimental designs; and nature of experimental controls. Gives experience in planning, conducting, and reporting original exploratory experiments.
- 580. Comparative Psychology.** (3:3:0) F. (m) Prerequisite: Psych. 111. Fleming
Survey of methods and results of research on animal learning, innate behavior, motivation, individual differences, social behavior, and abnormal behavior; correlation of structure with function.

585. **Advanced Physiological Psychology.** (3:3:0) S. (m) Prerequisite: Psych. 111. Fleming
Critical study of physiological processes and psychological functions; physiological mechanisms underlying behavioral processes, including sensation, emotion, sleep and activity, motivation, and learning.
- 598. **Independent Research.** (1-3:0:2-6) F.S. Prerequisite: undergraduate core courses. Staff
606. **Psychology of Music.** (3:3:0) S. Prerequisites: Psych. 111 and Physics 105 and 106 or equivalent. Staff
Designed for and required of graduate students majoring in music education.
610. **Systematic Psychology I: History and Contemporary Thought.** (4:4:0) F. Prerequisite: undergraduate core courses. Howell
611. **Systematic Psychology II: Psychology Theory.** (4:4:0) S. Prerequisite: Psych. 610. Howell, Taylor
626. **Mental Deficiency.** (2:2:0) F. Prerequisite: Psych. 378 or equivalent. Allen
627. **Gifted Children.** (1:1:0) S. Prerequisite Psych. 378. Cundick
628. **Psychology of the Physically Handicapped.** (2:2:0) F. Prerequisite: Psych. 378. Taylor
- 640. **Individual Test Practice.** (5:3:8) F.S. Prerequisite: Psych. 378 or Grad. Ed. 645 and consent of instructor. Bennion, Cundick, Howell
642. **Special Diagnostic Tests.** (2:0:6) S. Prerequisite: Psych. 640. Staff
- 645. **Professional Problems in Psychology.** (3:3:0) F. Howell, Taylor
Professional relations with other mental health disciplines, courtroom procedures, developing professionalism, criminal responsibility, and legal insanity.
- 651. **Problems in Psychopathology.** (2:2:0) S. Prerequisites: Psych. 540 and consent of instructor. Bennion, Howell
654. **Dynamics of Religious Behavior.** (3:3:0) Prerequisites: Psych. 111. Allen
655. **Psychosomatic Problems.** (2:2:0) F. Prerequisites: Psych. 540 and consent of instructor. Trunnell
662. **Complex Thought Processes.** (3:3:0) S. Prerequisite: Psych. 360. Daniels
665. **Human Motivation.** (3:3:0) F.S. Prerequisites: Psych. 365 or equivalent; graduate standing in psychology or allied discipline. Hardy
670. **Advanced Statistics I.** (3:3:0) F. Prerequisite: Psych. 370. Cooper, Pedersen, Smith
671. **Advanced Statistics II.** (3:3:0) S. Prerequisite: Psych. 670. Pedersen
675. **Experimental Psychodynamics.** (2:1:4) F. Prerequisites: undergraduate core courses and consent of instructor. Cooper, Howell
678. **Measurement Theory.** (3:3:0) S. Pedersen
680. **Introduction to Psychotherapy.** (3:3:0) S. Prerequisites: undergraduate core courses and consent of instructor. Bennion, Robinson
- 690. **Seminar: Research Problems.** (2:2:0) F. Staff
- 695. **Independent Readings.** (1-2:Arr..Arr.) F.S.Su. Staff
- 699. **Thesis for Master's Degree.** (1-6:Arr.:Arr.) F.S.Su. Staff

740. **Introduction to Projective Techniques.** (3:2:3) F. Prerequisites: Psych. 550 and 640. Bennion, Taylor
741. **Rorschach Test Practice.** (3:1:8) S. Prerequisite: Psych. 740. Bennion, Howell
743. **Practicum: Diagnostic Testing.** (2:0:6) S. Prerequisite: Psych. 741. Bennion, Howell
747. **Internship in Clinical Testing.** (2-4:1:5-11) F.S.Su. Prerequisite: Psych. 743. Bennion, Howell
748. **Internship in Clinical Testing.** (2-4:1:5-11) F.S.Su. Prerequisite: Psych. 747. Bennion, Howell
- 750,751,752,753. **Hospital Internship.** (0:0:32 ea.) Staff
780. **Individual Psychotherapy: Practicum.** (3:1:8) F.Su. Prerequisite: Psych. 680. Bennion, Howell
781. **Individual Psychotherapy: Practicum.** (3:1:8) S. Bennion, Howell
782. **Group Therapy: Theory and Practice.** (3:1:8) S. Prerequisite: Psych. 680. Howell
783. **Play Therapy: Theory and Practice.** (3:3:3) S. Prerequisites: undergraduate core courses and consent of instructor. Taylor
790. **Seminar: Clinical Problems of Genetic Psychology.** (1:1:0) S. Prerequisite: consent of instructor. Taylor
791. **Seminar: Personality.** (1:1:0) F. Prerequisite: consent of instructor. Staff
792. **Seminar: Social Psychology.** (2:2:0) S. Prerequisites: consent of instructor, Sociol. 350 or Psych. 350. Smith
793. **Seminar: Learning.** (1:1:0) S. Prerequisite: consent of instructor. Staff
- 797, 798. **Independent Research.** (1-4:0:3-12 ea.) F.S. Prerequisite: consent of instructor. Staff
799. **Ph.D. Dissertation.** (Arr.) F.S.Su. Staff



Administering a psychological test as a learning device

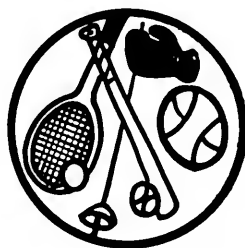
Recreation Education

Professors: I. Heaton (chairman, 226 SFH), Hartvigsen.

Associate Professor: Packer.

Assistant Professors: Hafen, A. Heaton.

Instructors: Call, deHoyos, Jensen, Naylor.



A student interested in this field may complete courses for a recreation major, a minor, or a composite major. He may also take specified recreation courses to fill certain general education requirements, and he may register for recreation courses on an elective basis.

Recommended Courses for Majors

Freshman Year

	Hours
Dev. assy.	1
Forum assy.	1
Phys. Ed. 180, 182	1
Relig. 121, 122	4
Eng.	6
Health 121, 130	4
Gen. ed.*	12
Réc. 123	1
Electives	3

Total Hours 33

Sophomore Year

	Hours
Dev. assy.	1
Forum assy.	1
Phys. Ed. 280, 281 and electives	3
Relig.	4
Hist.	3
Gen. ed.*	12
Music 102	2
H.D.F.R. 210	3
Electives	4

Total Hours 33

Junior Year

	Hours
Dev. assy.	1
Forum assy.	1
Phys. Ed. 376 and electives	3
Relig. 365 and electives	4
Gen. ed.*	10
Rec. 301, 337	4
Rec. 387, 388	4
Crafts	4
Electives	2

Total Hours 33

Senior Year

	Hours
Dev. assy.	1
Forum assy.	1
Phys. Ed. 514 and electives	3
Relig.	2
Rec. 371, 502 or 503	4
Rec. 505, 507, 579	9
Major electives**	5
Electives	8

Total Hours 33

*See General Education Program for requirements. Recommended courses include: Bot. 101, Dram. Arts 121, Commun. 101, geology, Physics 177, Psych. 111, Sociol. 111.

**Major electives should be selected from Pol. Sci. 111, 130; Sociol. 449; Psych. 357; Speech 305.

Recreation Minor

Students minoring in recreation should take the following courses: Rec. 123, 301, 337, 371, 387, 388, 505, and 507.

Seasonal Intramural Participation

Students are encouraged to participate in the following intramural activities on a noncredit basis. These activities are conducted afternoons, evenings, and on Saturdays.

Autumn	Winter	Spring
Badminton	Basketball	Archery
Cross country run (Turkey Trot)	Bowling	Badminton
Flag football	Checkers	Bicycle race
Golf	Chess	Golf
Handball	Fencing	Handball
Table tennis	Gymnastics	Horseshoes
Tennis	Ice skating	Softball
Volleyball	Paddleball	Swimming
Battle of the Beef	Skiing	Table tennis
	Table tennis	Tennis
	Wrestling	Track and field

Courses

- 85, 86. Precision Dance Drill. (0:0:3) F.S. Parry
123. Skills and Techniques for Outdoor Recreation. (1:0:3) S. (m) Hafen
301. Introduction to Recreation. (2:2:0) F.S.Su. (m) Hafen
337. Philosophy of Recreation. (2:2:0) F.S.Su. Home Study also. (G-SS m) Staff
371. Planning for Family and Neighborhood Recreation. (2:2:0) S.Su. Home Study also. (m) A. Heaton
387. Planning for Social Recreation. (2:2:0) F.S.Su. Home Study also. (m) A. Heaton
388. Leadership in Church Dance. (2:2:0) F.S.Su. (m) A. Heaton
Designed to give experience and training in dance programs for community, school, and particularly church recreation leaders.
502. Camping Education. (2:2:0) S.Su. (m) Packer
Fee of \$10.00 required.
503. Administration of School and Community Camps. (2:2:0) S. (m) Hafen
Objectives and problems involved in establishing community and school camps. Best practices dealing with location, safety, health, and program of activity are thoroughly analyzed.
505. Administration of Community Recreation. (3:3:0) S.Su. (m) I. Heaton
Problems peculiar to the organization and administration of a community recreation program including objectives, legal aspects, facilities, personnel, activities, budgeting and public relations.
507. Administration of Playgrounds and Community Centers. (3:3:0) S.Su. Hafen
570. Recreation for the Ill and Handicapped. (2:2:0) F.Su. Call
- 579A,B. Directed Leadership in Recreation. (1-6:0:4-20 ea.) F.S.Su. Prerequisite: consent of department chairman. I. Heaton
A. Supervised experience in public recreational programs; B. private recreational programs.
583. Workshop in Recreational Dance. (2:2:0) F.S.Su. deHoyos, A. Heaton
609. The Recreation Program. (2:2:0) F.Su. I. Heaton

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|---|------------|
| 691. Graduate Seminar. (0:1:1) F.S.Su. | Heaton |
| 692. Research Methods in Recreation. (3:3:0) S.Su. | I. Heaton |
| 694. Seminar in Readings. (2:2:0) F.S.Su. | Hartvigsen |
| 695. Seminar in Community School Recreation. (2:2:0) F.S. | I. Heaton |
| 696. Seminar in Problems in Recreation. (1:1:0) S.Su. | I. Heaton |
| 698. Field Projects. (1-4:2-5:0) F.S.Su. | I. Heaton |
| 699. Thesis for Master's Degree. (1-6:1-5:0) F.S.Su. | I. Heaton |

See the Recreation Education Department office for courses from other departments which count in recreation.



Receiving dance instruction in a recreation education class

Skills Improvement Service

Professor: Reid (chairman, A-235 ASB).



Many students entering universities are not well equipped to do the academic work required of them. The purpose of the Skills Improvement Service of General College is to provide assistance that will enable such students to compete more effectively in their academic endeavors. Improvement is often necessary in such skills as reading, writing, mathematics, spelling, and effective study.

The Skills Improvement Service has a special obligation to students entering the University on academic warning. Specific policies and procedures which have a bearing on these students are listed below:

1. They are required to enroll in General College in this department regardless of their class standing at the time of admission.
2. They are encouraged to limit their course load for the first semester.
3. They are given special diagnostic tests to determine the nature and extent of their academic handicap.
4. They are required to take Skills Improvement Service 101, Effective Study and Adjustment to College, during the first semester they attend the University.
5. Under the jurisdiction of the Skills Improvement Service, they will be directed by specially selected advisers. The advisers have accepted the responsibility of meeting these probationary students at frequent regular intervals in an effort to help them work out the specific adjustment problems which arise during the first semester at the University. If students do not achieve the minimum academic standards of their class, they will continue to work with their adviser in the Skills Improvement Service for the next semester.
6. Students who maintain a B.Y.U. cumulative grade-point average equal to or above the minimum standard for their class (1.75 for freshmen and 2.00 for sophomores, juniors, and seniors) may register in any college or department in the University. They must, however, meet the standards for admission set by the department or college of their choice.

Listed below are the classes currently offered by the University as remedial courses. Enrollment in these courses is not restricted to students on academic warning or probation. The one exception is Skills Improvement Service 101, which is limited to students on academic warning during the first semester of each year. Many students can profit academically by availing themselves of these classes and are encouraged to do so in an effort to meet their own study-skills needs. For detailed course listings see the appropriate departments.

English 10. Preparatory English
English 15. Remedial English for Juniors
English 55, 56. English for Bilingual Students
Speech 60. Remedial Speech

Mathematics 51. Plane Geometry

Mathematics 97. Review Course

Reading Laboratory. The Reading Laboratory is administered by the Skills Improvement Service. It was created to help students who need to build speed and comprehension in reading. Students are encouraged to avail themselves of the opportunity to learn how to read better and faster. The service is available without charge to all full-time students.

Students may participate in this program by registering directly through the Skills Improvement Service of General College, Room A-235, ASB. This is a noncredit program, and primary motivation for participation is self-improvement.

On a fee basis, Adult Education and Extension Services of the University offers a developmental reading course similar to that of the Skills Improvement Service. Students may avail themselves of this course by contacting Adult Education and Extension Services.

Courses

15. Remedial Spelling. (0:2:0) F.S.

Staff

Improvement of ability to spell through the study of such techniques as spelling rules, prefixes, suffixes, roots, and use of the dictionary.

20x. Developmental Reading. (0:2:0) Home Study only.

Staff

101. Effective Study and Adjustment to College. (1:3:0) F.S. Home Study also.

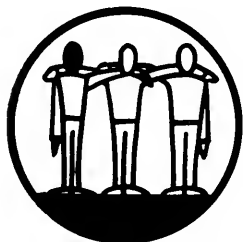
Staff

Course covers such areas as: budgeting time, notetaking, reading, listening, use of library, how to take examinations, motivation, and concentration. Time is also spent in studying the application of psychological principles to typical problems of college students.



Improving skills in operating basic office machines

Sociology and Anthropology



Professors: Symons (chairman, 1216 A SFLC), Ballif, Bradford, Christiansen, Dyer, Smith.

Associate Professors: Fitzgerald, Larsen, Peterson, Sorenson.

Assistant Professors: Brown, Duke, Myers, Payne.

Because both sociology and anthropology share their theory and methods to a significant degree, it is the practice at B.Y.U. in common with most American universities, to administer the two disciplines under the same department. For clarity of reference, however, classes and information on each field are presented separately.

Sociology

Sociology is the scientific study of human interaction and the results of such interaction. Attention is given to the social systems which are thus developed and to the norms, roles, statuses, institutions, knowledge, values, etc. (culture), which are related thereto, including the relationship of these factors to conditions of social stability and instability. Specific application of sociological concepts is made to major social units such as familial, peer, religious, educational, occupational, political, medical, racial, and ethnic groups.

A sociology major is necessary for students planning to become professional sociologists: experts who will do teaching, research, consulting, etc., in the field. Sociology is also basic preprofessional preparation for those with occupational services goals such as:

Social work	Recreation	Industrial relations
School teaching	Professional scouting	Governmental service
General counseling	Red Cross work	Crime control
Social science research	Community planning	

By combining a sociology major with a teaching certificate (see Teacher Education Department), occupational services goals, and/or preprofessional social work offering, one can gain a two or three-way employment potential. Especially are the openings in the preprofessional social work area currently numerous and inviting.

The Department of Sociology gives the Bachelor of Science degree. Beyond the general education requirement, the student may elect to fill the new requirement either in the language or the science areas.

Requirements for a Major

Majors in the department are required to take Sociol. 111, 112, 220 A or B, 397, 404 (unless moving toward preprofessional social work), 405, 491, and to present total sociology credit of 30 hours or more. A maximum of 6 of the 30 hours may be chosen from a selected list of courses in other departments, with consent of the departmental adviser. Courses listed as soc-psych (social-psychology) may be used for credit either in sociology or psychology, but not in both.

Sociology is one of the subjects comprising the composite major in social science designed for prospective teachers. See courses in sociology listed under the College of Education. Prospective teachers who intend to either major or

- 543. Social Legislation.** (2:2:0) S. (m) Ballif
Basic problems and techniques of social legislation. Analyzes various systems now in operation.
- 550. Social Aspects of Physical Disability.** (3:3:0) F. Peterson
Human relationships and social interaction in the lives of the physically handicapped, plus the study of special governmental and social agency attention to their needs and well-being.
- 551. Sociology of Recreation.** (2:2:0) S.Su. (m) Ballif, Payne
Treats relations of recreational interests to growth, group behavior, and social maladjustments. Emphasizes basic theories of recreative activities.
- 552. Personality: Culture and Society.** (3:3:0) F. (m) Prerequisite: Sociol. 111 or Psych. 111 Christiansen, Dyer, Larsen
- 555. (Soc-Psych) Group Dynamics.** (2:2:0) F.S. (m) Prerequisite: Sociology 350. Dyer, Larsen
Analyzes research and theories of group dynamics.
- 560. The Family Institution.** (2:2:0) S. (m) Bradford, Christiansen
Emphasizes the family in several different societies and problems created by various family systems.
- 561. Contemporary Sociological Research.** (2:2:0) S. (m) Staff
- 570. Class, Status, and Power.** (2:2:0) F. (m) Prerequisite: Sociol. 111. Fitzgerald, Duke
Analyzes the major status and class systems in various societies. Also discusses power relations in such systems.
- 580. Social Relations in Medical and Health Organizations.** (2:2:0) S. (m) Peterson
Analyzes the structure of medical and health organization. Designed for premedical, pre dental, and health education students, as well as sociology majors.
- 591. Seminar in Crime Causation and Treatment.** (2:2:0) F.Su. (m) Prerequisites: Sociol. 111, 380. Smith, Symons
Considers the major causes of crime and analyzes prevalent theory and techniques of treatment of criminals.
- 595. Directed Readings.** (1-3:0:2-6) F.S.Su. (m) Staff
Readings in special areas.
- 596. Directed Readings.** (1-3:0:2-6) F.S.Su. (m) Staff
Readings in special areas.
- 597. Advanced Research Methods.** (3:3:0) S. (m) Prerequisite: Sociol. 497. Peterson
Analyzes methods used in investigation of sociological data. Field projects give the student actual experience in research.
- 604. Seminar in Sociological Theory.** (2:2:0) S.Su. Prerequisites: Sociol. 404 and 405. Bradford, Dyer, Duke
An advanced course in sociological theory.
- 612. Problems in Rural Society.** (3:2:1) F. Prerequisite: Sociol. 423 or consent of instructor. Christiansen
Field type training, with on-the-job contacts with county agents, et al. Findings from these contacts will be the classroom material.
- 620. Problems in Demography.** (3:3:0) F. Prerequisite: Sociol. 420 or consent of instructor. Fitzgerald
Current population problems of local, state, national, and international significance are considered. Complications involved in local and state trends receive special attention.

- 623. Demographic Analysis.** (3:3:0) S. Prerequisites Sociol. 420, 620. Fitzgerald
The discipline of demography, with its special methods and procedures is analyzed. Major current research in the field receives careful coverage.
- 626. Contemporary Urban Social Structure.** (3:3:0) S. Prerequisite: Sociol. 426 or consent of instructor. Fitzgerald, Smith
Research oriented examination of social forces in contemporary urban life which influence patterns of human interaction.
- 660. Familial Role Structure.** (3:3:0) S. Prerequisite: Sociol. 403. Bradford
Analysis of the various roles in the family, with their attendant characteristics and problems, in various societies, but particularly in the United States.
- 670. Social Structure of the Mental Hospital.** (3:1:4) F. Prerequisite: consent of instructor. Staff
In cooperation with the Utah State Hospital, students participate in an analysis of the relationship between social structure of the hospital and patient behavior.
- 686. Problems in Race Relations.** (2:2:0) F. Ballif, Larsen
Considers significant problems of a specialized nature in the field of race relations.
- 693. A Study of Contemporary Rural Sociological Research.** (3:3:0) S. Prerequisites: Sociol. 423 and 612. Christiansen
Basic analysis of principles of rural sociology. Also review of leading research in the field. Research designs planned and some limited type research done.
- 694. Directed Research.** (1-3:0:2-6) F.S.Su. Staff
Research in special areas.
- 696. Seminar in Industrial Sociology.** (3:3:0) S. Prerequisite: Sociol. 446. Dyer, Larsen
Designed to give added insight by careful attention to current trends in industry, labor-management developments, government, participation, etc.
- 699. Thesis for Master's Degree.** (1-4:Arr.:Arr.) F.S.Su. Staff
- 701. Advanced Statistical Methods.** (2:2:0) S. Prerequisites: Sociol. 320, 524. Christiansen, Peterson
Consideration of advanced statistical techniques such as scalogram analysis, factor analysis, and latent structure analysis.
- 791. Seminar: Social Organization.** (2:2:0) F. Prerequisites: Sociol. 111, 405. Staff
Comprehensive examination of major theories of organization with emphasis upon theory construction.
- 792. Seminar: Social Psychology.** (2:2:0) S. Prerequisites: Sociol. 350 and consent of instructor. Staff
Special emphasis on group processes and socialization.
- 796, 797. Special Research Problems.** (1-3:0:2-6 ea.) F.S.Su. Staff
- 799. Dissertation for Ph.D.** (Arr.) F.S.Su. Staff

ANTHROPOLOGY

Anthropology is the discipline which seeks to establish scientific explanations for the differences in the ways of life of the world's peoples. It is commonly considered a social science, but anthropology also has important historical roots and research interests in the natural sciences on the one hand and the humanities on the other.

Professional qualification as an anthropologist requires graduate training, ideally to the Ph.D. degree. A student usually specializes in graduate school as an archaeologist, social anthropologist, linguistic scientist, physical anthropologist, or applied anthropologist, once he has a broad knowledge of the whole discipline. Training at the undergraduate level is intended to introduce the whole range of studies comprising the field. This comprehensive introduction prepares one for certain applied positions, such as counselor with minority groups or a career in foreign service. The greatest value of anthropology for undergraduates is, however, in providing an exciting and challenging education which ties together in a single framework all the student can learn about the world around him.

For a Major

The major in anthropology requires completion of 30 credit hours in anthropology courses, including 101, either 241 or 246, either 325 or 361, one of 413, 414, 417, or 418, one of 305, 333, 431, or 432, and both 480 and 481. On occasion certain courses in other subject areas may be counted toward the total required hours.

The degree offered is Bachelor of Science. The special University requirement for this degree may be met either by taking 12 hours of appropriate language courses or 9 hours from the approved list of science and mathematics courses.

For a Minor

Fourteen hours in anthropology courses are required, including 101, one of 413, 414, 417, or 418, one of 305, 333, 431, or 432, and either 480 or 481. The field makes a valuable minor to accompany a major in such areas as art, English, family living, geography, geology, history, communications, languages, political science, psychology, and sociology.

Students with particular career aims, either those majoring in the field or those in other subjects who see an advantage in involving some anthropology in their programs, are welcome to consult the departmental faculty about the best selection of courses for their particular goals. Individual guidance is also regularly given to those wishing to choose an appropriate graduate school or obtain employment. Research by undergraduate students is encouraged, and assistance can sometimes be provided. An annual prize is given for the best student paper.

Some of the courses listed below will not be taught each year because of staff limitations. Those not taught one year will be given the next.

Courses

101. **Introductory Anthropology.** (3:3:0) F.S. Home Study also. (G-SS) Staff
The basic data, concepts, and conclusions for the entire field, with emphasis on social anthropology.
111. **Cultures of the World.** (3:2:2) S. Home Study also. (G-SS) Staff
Ethnology. The variety of behavioral patterns seen through study both of a sample of societies and of geographical distributions of cultural features.
241. **The Growth of Culture in the Old World.** (3:3:0) F. Sorenson
The course and processes of development of culture in the eastern hemisphere. Emphasis is on prehistory.
246. **The Growth of Culture in the New World.** (2:2:0) S. Sorenson
What happened in the western hemisphere before the coming of the Europeans, examined in terms of culture processes.
302. **The American Indian Today.** (2:2:0) F. Myers
Conditions among and problems confronting major Indian groups of North America at this time.

- 305. Moral and Ritual Institutions.** (3:3:0) F. Myers
Religion, magic, witchcraft, sorcery, mythology, cosmology, totemism. Morality in the simpler societies in relation to ritual and belief. Comparative religion.
- 325. Introduction to Descriptive Linguistics.** (2:2:0) S. Staff
Same as Linguistics 325.
- 333. Economic Institutions of Primitive Peoples.** (3:3:0) S. Myers
Organization of production, consumption, and exchange, and their relation to other structured activities in nonindustrial societies. Wealth, capital, labor, land tenure, property.
- 361. Physical Anthropology.** (2:2:0) F. Sorenson
Human biology as a factor in explaining behavior differences, with emphasis on evolution and genetics.
- ☐ **Art 403. Ancient and Primitive Art.** (2:2:0)
- 413. Peoples of Africa.** (2:2:0) S. Myers
An ethnographic survey of peoples south of the Sahara.
- 414. Peoples of East Asia.** (2:2:0) S. Sorenson
A survey of the traditional social systems of the area.
- 417. Native Peoples of North America.** (2:2:0) F. Myers
Distribution, characteristics and background of the peoples north of Mexico before European dominance.
- 418. Native Peoples of Central and South America.** (2:2:0) S. Myers
Distribution, characteristics, and background of the descendants of the peoples in the area before European dominance.
- 431. Systems of Kinship and Marriage.** (3:3:0) F. Myers
Types of kinship and marriage systems in various societies; their relationship to political, legal, economic, and ritual institutions.
- 432. Political Institutions of Primitive Peoples.** (3:3:0) S. Myers
Stateless societies and the evolution of the state. Kingship, chiefship, and achieved leadership. Councils; warfare; law, custom, and public and private wrongs. Sanctions; judicial institutions.
- 471. The American Culture.** (3:3:0) S. Sorenson
Life in the U.S.A. viewed in the light of the methods and concepts of anthropology.
- 480. Theory and Method I.** (3:2:2) F. Sorenson
History and present status of anthropological theory and methods as a preparation for engaging in research.
- 481. Theory and Method II.** (2:1:2) S. Myers
Supervised experience in research.
- 491. Readings.** (1-3:0:2-6) F.S.Su. Staff
Guided reading and report on a subject agreed upon by student and teacher. Approximately 1000 pages assigned per credit hour.
- ☐ **Soc. 552. Personality: Culture and Society.** (3:3:0)

minor in sociology other than on the composite basis should also check requirements concerning sociology courses listed under the College of Education.

Requirements for a Minor

For students minoring in sociology, Sociol. 111 is required, with remaining hours to be recommended by the student's department and/or adviser, according to the needs and interests of the student.

Suggested Program for a Sociology Major (and Occupational Services² Goal)

Freshman Year			Junior Year		
	F	S		F	S
Relig. 121, 122	2	2	Relig.	2	2
Eng. 111, 112	3	3	*Sociol. 404 or 405	3	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Sociol. electives	3	3
Phys. sci.	3	3	Electives (minor)	3	3
Humanities & fine arts	2	3	MSLS or lang.	3	3
*Sociol. 111	3		Electives (other)	2	2
*Sociol. 112		3			
Electives (minor)	3	2	Total Hours	16	16
Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$			
Sophomore Year			Senior Year		
	F	S		F	S
Relig.	2	2	Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	*Sociol. 397	3	
Biol. sci.	3	3	*Sociol. 491		2
Humanities & fine arts	3		Electives (other- or		
Hist.		3	sociol.)	6	6
Health	2		Electives (sociol.)	3	3
*Sociol. 220 A	3		Electives (minor)	2	2
Gen. ed.**	3	3			
Electives (sociol.)		3-4	Total Hours	16	15
Total Hours	16 $\frac{1}{2}$	14 $\frac{1}{2}$ -15 $\frac{1}{2}$			

Recommended electives for sociology majors: 316, 348, 350, 403, 420, 423, 426, 449, 516, 524, 552, 560, 561, 570, 597.

Recommended electives for occupational services goals: 357, 380, 383, 389, 403, 410, 446, 449, 480, 512, 542, 543, 550, 551, 555, 580, 591.

² Such areas as industry, community analysis, research, agencies, housing, teaching, etc.

* These courses are required of all majors.

**Refers to new mathematics, statistics, logic, science, language requirement. Three of twelve hours of language may be applied to humanities.

Suggested Program for Preprofessional Social Work

Freshman Year			Sophomore Year		
	F	S		F	S
Relig. 121, 122	2	2	Relig.	2	2
Eng. 111, 112	3	3	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Biol. sci.	3	3
Phys. sci.	3	3	Humanities	3	
Humanities & fine arts	2	3	Psych. 111		3
*Sociol. 111	3		Health	2	
*Sociol. 112		3	*Sociol. 220 B	3	
Elective (other)	3		Sociol. 380 or 383		2-3
Pol. Sci. 110		3	MSLS or lang.**	3	3-4
			Hist. 121		3
Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$ -18 $\frac{1}{2}$

Junior Year			Senior Year		
	F	S		F	S
Relig.	2	2	Relig.	2	2
*Sociol. 405	3		*Sociol. 397	3	
Sociol. 360	2		*Sociol. 491		3
Sociol. 362	2		Psych. 445	3	
Sociol. 364		2	Psych. 540		3
Sociol. 449	2		Electives (minor)	3	3
Electives (minor)	3	5	Sociol. 389	3	
MSLS or lang. or			Electives (sociol.)	3	6
elective	3	6			
Hous. & Home Mgt. 351		2	Total Hours	17	17
Total Hours	17	17	Recommended Electives:		
			Sociology—316, 357, 403, 410, 480,		
			542, 543, 550, 551, 580.		
			Psychology—320, 321, etc.		

(For other departments, consult adviser)

*These courses are required for all majors.

**Refers to new mathematics, statistics, logic, science, language requirement.

Courses

- 111. Introductory Sociology.** (3:3:0) F.S.Su. Home Study also. (G-SS m) Staff
Foundation course designed to give groundwork for all sociological study. Presents general view of how social organization affects human behavior.
- 112. Modern Social Problems.** (3:3:0) F.S.Su. Home Study also. (G-SS m) Staff
Analyzes forces in society which produce such modern social problems as war, crime, divorce, suicide, race friction, etc., and focuses attention on alleviation and prevention programs.
- 125. Applied Sociology.** (2:2:0) F.S.Su. (G-SS m) Fitzgerald
Presents applications of sociological principles and teachings in such fields as teaching, business and industry, nursing, military life, and medicine.
- 220. Social Statistics.** (3:3:0) F.S.Su. (m) Home Study also. Christiansen, Peterson
Section A. Statistical procedures used in sociological research, including averages, variation, hypothesis testing, and scientific prediction.
Section B. Emphasis on developing skill in statistical interpretation and analysis of studies in social work and other applied fields.
- 300, 301. People and Cultures Around the World I, II.** (1-3:Arr.:Arr. ea.) F.Su. Limited to participants in BYU Travel Studies Program Staff
Analyzes the principal sociological aspects of those societies included in the B.Y.U. Travel Studies tours.
- 316. Social Control.** (2:2:0) S. (m) Larsen, Payne
Importance of public opinion, belief, social suggestion, ceremony, personal ideals, etc., as means of controlling behavior.
- 348. Collective Behavior.** (2:2:0) S. (m) Ballif, Larsen
The action of groups which operate without clearcut direction from the culture within which they are found. Such groups as lynching mobs, riots, and crowds are analyzed as well as mass behavior and communication. The causes, nature, and consequences of such behavior are considered.
- 350. (Soc-Psych) Introduction to Social Psychology.** (3:3:0) F.S.Su. Home Study also. (G-SS m) Prerequisite: Sociol. 111 or Psych. 111. Staff
Nature of social influences; socialization; concept of norm; role and status; development of beliefs and attitudes; leadership; group processes. Applications to prejudice, persuasion, social control.

357. (Soc-Psych) **Group Relations and Leadership.** (3:3:0) F.S.Su. Home Study also. (m) Dyer, Hardy
Designed to help the individual participate effectively in group life and to assist leaders to become efficient in role performance.
360. **Introduction to Social Work.** (2:2:0) F. (m) Prerequisite: Sociol. 111. Ballif, Symons
Introductory survey of the various fields and methods of social work. Considers implications of social work for the related professions.
362. **Introduction to Social Case Work.** (2:2:0) F. (m) Prerequisite: Sociol. 360. Symons
Analyzes principles and practices of case work with the maladjusted and dependent.
364. **Introduction to Social Group Work.** (2:2:0) S. (m) Prerequisite: Sociol. 360. Symons
Analyzes the principal theories and practices in social group work.
380. **Introductory Criminology and Penology.** (3:3:0) F.S.Su. Home Study also. (m) Smith, Symons
Analyzes nature and extent of criminal behavior. Emphasizes current theory and research as they relate to the causes of crime.
383. **Juvenile Delinquency.** (2:2:0) F.S.Su. Home Study also (m) Prerequisite: Sociol. 111. Smith, Symons
Analyzes lawlessness of children and adolescents. Stresses causations, treatment, prevention, and outlook.
386. **Organized Crime.** (2:2:0) S. (m) Prerequisites: Sociol. 111, 380 or 383. Symons
Historical backgrounds for development of organized crime in the United States. Considers proposals for prevention.
389. **Social Aspects of Mental Health.** (3:3:0) F. Home Study also. (G-SS m) Christiansen, Symons
Personality disorders and emotional maladjustments which originate in group life. Social causation, treatment, and prevention of mental ills.
397. **Methods of Research in Sociology.** (3:3:0) F.S.Su. Home Study also. (m) Prerequisite: Sociol. 111. Christiansen, Peterson
Basic methods of research used in investigation of sociological data.
403. **Marriage and the Family in American Society.** (2:2:0) F.S.Su. Home Study also. (m) Bradford, Fitzgerald
Analyzes the effect that American society has upon successful marriage and family living. Problems connected with the roles of child, adolescent, wife, husband, and the aged are discussed.
404. **Development of Sociological Theory.** (3:3:0) F.S.Su. Prerequisite: Sociol. 111. Bradford, Duke, Dyer
Analyzes the development of prominent sociological theories and the contributions of outstanding theorists.
405. **Social Systems Analysis.** (3:3:0) F.S.Su. (m) Prerequisite: Sociol. 111. Bradford, Duke, Dyer
Analysis of generalizations derived by sociology concerning how human behavior is affected by the nature and type of social organizations within which human beings live and interact.
410. **Racial and Minority Group Relations.** (2:2:0) F.Su. Home Study also. (m) Larsen, Ballif, Payne
Basic processes in present-day interrelations of racial and minority groups. Analyzes prejudice, its causes, and programs for its reduction.

- 420. Population Problems.** (3:3:0) F. Home Study also. (m) Fitzgerald, Payne
The relationship of population factors to important problems encountered in education, labor, government, and other facets of modern life.
- 423. Rural Sociology.** (2:2:0) S. (m) Prerequisite: Sociol. 111.
Christiansen, Fitzgerald, Payne
Gives attention to the particular factors and problems of rural life.
- 426. The Sociology of Urban Life.** (3:3:0) S. (m) Prerequisite: Sociol. 111.
Fitzgerald, Smith
A sociological examination of norms, social controls, and social processes (and changing patterns in all of these) as they are seen in urban social life in both historical and contemporary perspective. Human ecology is also emphasized.
- 446. Sociology of Industrial Relations.** (3:3:0) S. (m) Dyer, Larsen
Role that social forces play in determining industrial organization. Emphasizes labor-management relations and problems of applied industrial sociology.
- 449. Community Organization, Action, and Planning.** (2:2:0) F. Home Study also. (m) Larsen, Ballif, Dyer, Fitzgerald
Basic fundamentals of community life. Analyzes techniques and methods for organizing community resources for efficient achievement of community objectives.
- 470. Social Change.** (3:3:0) S.Su. (m) Prerequisite: Sociol. 111.
Bradford, Larsen, Peterson
Analyzes the factors and processes of social change.
- 480. Sociology of Aging.** (2:2:0) F. (m) Bradford
Analyzes societal factors as they affect aging, Discusses demographic factors, political implications, agencies serving the older citizens, and role of the community in solving problems of aging.
- 491. Senior Seminar.** (2:2:0) F.S.Su. (m) Prerequisites: Sociol. 111; senior standing. Staff
Analysis, formation, and integration of basic sociological concepts. For students working toward master's or doctor's degrees, the following groupings of courses are inserted: **Demography** (minor only)—620, 693; **deviant behavior** (major or minor)—591, 670, 686; **family** (minor only)—560, 660; **research methods** (major)—524, 561, 597, 701; **rural sociology** (minor only)—523, 693; **social psychology** (minor only)—542, 552, 555, 623, 792; **social organization** (major or minor)—512, 516, 570, 626, 696, 791; **sociological theory** (major or minor)—604; **special readings and research** (major or minor)—595, 596, 694, 796, 797; **other courses** (minor only)—543, 551; **thesis** (major)—699, 799.
- 512. Sociology of Education.** (2:2:0) S. (m) Christiansen, Smith
Analyzes principles of sociology of education and their implication for theory and practice of school administration, curricula, and methods of instruction.
- 516. Sociology of Religion.** (2:2:0) F. Home Study also. (m). Larsen
Analyzes influences of social factors in development of various religious systems.
- 524. Advanced Social Statistics.** (3:3:0) F. (m) Prerequisite: Sociol. 111.
Christiansen, Peterson
Advanced course designed for those who intend to do research or continue in graduate work.
- 542. Social Movements.** (2:2:0) S. (m) Payne
Discusses, social aspects of various movements from Adam Smith to John Dewey with special emphasis on social reform movements in the United States.

- 446. Anatomy of the Ear and Vocal Organs.** (2:2:0) F. (m) Baer
Special emphasis will be given to the anatomy and physiology relating to phonation, articulation, neurology, embryology, and hearing. Pictures and illustrations are gathered by students.
- 449. Organic Speech Disorders.** (2:2:0) S. Home Study also. (m) Recommended: Speech 446. Baer
Nature, treatment, and diagnosis of organic speech disorders such as aphasia, cerebral palsy, cleft palate, dental abnormalities, and malocclusions, mental retardation, tongue thrust, and voice. (Formerly 542)
- 475. Practice Teaching in Correction of Speech and Hearing Disorders in the Public Schools.** (4:0:14) F.S. Prerequisites: completion of approximately 150 clock hours of supervised clinic practicum in speech and hearing correction in Speech 483.
Clinical practicum in the public school setting involving diagnosis and therapy. Participating in problems unique to the schools including scheduling, groupings, referrals, consultation and parent counseling. Student teaching fee is \$25.00. Formal application is necessary for placement.
- 479. Secondary Student Teaching.** (8:1:20-80) F.S. Prerequisites: Speech 377 and completion of two-thirds of courses required for teaching major and minor or composite major. Clinger
For course description and fees, see Tch. Ed. 479.
- 483A,B,C,D. Clinical Methods and Practicum in Speech and Hearing Rehabilitation.** (1-2:1:1-3 ea.) except 483 D which has credit as follows: (1-3:1:1-4) F.S.Su. (m) Prerequisite: Speech 362. Staff
Designed to build clinical competence with speech and hearing disorders. One to 4 credit hours per semester. Maximum of only 6 hours with Speech 475; 9 hours permissible without Speech 475.
- 491. Senior Seminar.** (2:2:1) S. (m) Clinger, Hansen
Required of all majors and minors. Attendance at Monday night Mask Club required.
- 523. Rhetorical Theory.** (2:2:0) F.Su. Bateman, Boren
- 524. High School Forensics and Programming.** (1-2:1-2:1-6) Su. Bateman, Boren
- 525. Debate Coaching.** (1-2:1-2:0) F.S. Boren, Richardson
Designed for prospective debate coaches. Covers debate techniques and how they are taught.
- 527. Storytelling.** (2:2:0) F.S.Su. Home Study also. (m) Clinger
Art of storytelling. Especially valuable to teachers and youth leaders.
- 543. Advanced Studies in Stuttering.** (2:2:0) F.Su. (Offered 1965-66) Morley
The consideration of theories, etiology, and current research in the nature and therapies used in treatment of this speech disorder. (Formerly 645)
- 544. Advanced Studies in Voice.** (2:2:0) F.Su. (Offered 1966-67) Baer
A study of the description physiology, etiology, management, treatment, and reeducation of voice disorders.
- 545. Public School Audiometry.** (2:2:2) S.Su. (Offered 1965-66) Weaver
Prerequisite: Speech 373 or equivalent.
Provides practical experience in various types of hearing measurement with particular emphasis on identification audiometry and hearing conservation programs for public school and preschool children.
- 546. Advanced Studies in Cerebral Palsy.** (2:2:0) F.Su. (Offered 1964-65) Jex
Study of the incidence, etiology, appraisal, and procedures for speech and hearing therapy of the individual with cerebral palsy. (Formerly 647)

- 547. Psychology of Speech.** (2:2:0) F.Su. (Offered 1964-65) Jex
Study of spoken language as a means of communication including speech perception, comprehension, dynamics, semantics, and symbols as related to human behavior.
- 561. Hearing Aids.** (1:1:0) F.Su. (Offered 1965-66) Prerequisites: Speech 373, 270 or equivalent. Weaver
Designed to acquaint students in speech, hearing, and related fields with basic designs, operation, selection, and use of hearing aids of all types for individuals with impaired hearing.
- 590. Selected Reading and Projects in Public Address.** (1-2:0:0) S.Su. Staff
Opportunity for expression of independent research and experimental work in special reading and public address projects over and beyond or outside of usual thesis work.
- 621. Ancient Rhetoric and Oratory.** (2:2:0) F. Boren
- 622. History of British Public Speaking.** (2:2:0) S. Boren
- 623. History of American Oratory and Public Address.** (2:2:0) F. Bateman, Clinger
- 624. Contemporary Public Address.** (2:2:0) S. Bateman, Richardson
- 640. Internship in Advanced Methodology and Clinical Practicum in Speech Pathology.** (1-2:1-2:0) F.S.Su. Staff
This internship may be completed, under proper supervision, at university clinics, in hospitals, community clinics, schools, etc., located locally or in other cities and states.
- 641. Internship in Advanced Methodology and Clinical Practicum in Audiology.** (1-2:1-2:0) F.S.Su. Staff
- 643. Methods and Problems of Research in Speech and Dramatic Arts.** (2:2:0) F. Baer, Metten
Required of all graduate students. It is imperative that students take this course early in their graduate program.
- 646. Advanced Studies in Cleft Palate.** (2:2:0) F.Su. (Offered 1964-65) Morley
Theories of cause, incidence, surgical and prosthodontic repair and therapy for speech cases with this problem.
- 648. Advanced Studies in Aphasia.** (2:2:0) S.Su. (Offered 1965-66) Baer
Nature, etiology, diagnosis, and therapy associated with the speech of child and adult aphasics (brain damaged), will be studied; also linguistic, behavioral, and intellectual changes.
- 656. Special Projects in Speech Pathology.** (1-4:1-4:0) F.S.Su. Staff
- 657. Special Projects in Audiology.** (1-2:1-2:0) F.S.Su. Staff
- 660. Clinical Audiology.** (2:2:2) S.Su. (Offered 1964-65) Prerequisite: Speech 373. Morley
The theoretical bases and development of skill in the techniques of administering new and advanced audiometric procedures in the assessment of impaired hearing. (Formerly 560)
- 692. Seminar in Public Speaking.** (1-3:1-3:0) F.S. Bateman
- 693. Special Studies in Speech Pathology.** (1-3:1-3:0) F.S.Su. Staff
- 694. Special Studies in Audiology.** (1-2:1-2:0) F.S.Su. Staff
- 695. Seminar in Psychoacoustics of Speech and Hearing.** (3:3:0) S.Su. (Offered 1964-65) Baer
A study of the acoustic nature of speech and hearing, intelligibility, characteristics of speech waves, frequency of occurrence of different speech sounds, and experimental phonetics.
- 699. Thesis for Master's Degree.** (Arr.) F.S.Su. Staff

Statistics

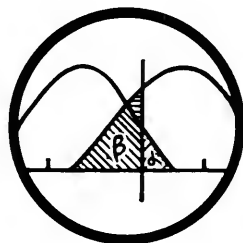
Professor: Nielson.

Associate

Professors: Carter (chairman, 348 JKB), Richards.

Assistant

Professors: Faulkner, Hilton.



The curriculum in statistics is designed to serve two purposes: (1) to provide for students the necessary educational background for careers as professional statisticians in industrial organizations, government agencies, and research institutes, and (2) to provide an integrated series of courses which will serve the entire University in providing technical tools which can be applied in many subject-matter areas.

Statistics, though a relatively recent professional field of study, has been given greater emphasis by a number of leading universities. There is a growing demand for statisticians in the natural and social sciences as well as in industry.

Statistics is an excellent major or minor in combination with accounting, agricultural economics, botany, business management, economics, engineering, mathematics, psychology, sociology, zoology, and other departments in the social, agricultural, biological, and physical sciences.

The department offers a major in statistics in either the College of Business or the College of Physical and Engineering Sciences. The department also offers the Master of Science degree and both an undergraduate and a graduate minor.

Requirements for a Major in Statistics in the College of Business

A. Departmental Requirements

Twenty-five hours including Statistics 221 or 321, 241, 330, 421, 422, and at least one of 522, 531, or 541	25
Math. 111, 112, 213	15
Total Hours	40

B. College of Business Requirements

Acctg. 201, 202, 342	9
Bus. Mgt. 340, 347, 348	9
Econ. 111, 112 and 311 or 312	9
Total Hours	27

Requirements for a Major in Statistics in the College of Physical and Engineering Sciences

A. Departmental Requirements

Statistics 221 or 321, 241, 336, 337, 421, 422, and four additional classes from 432, 433, 522, 531, 541, and Math. 311. Of these four, two must be in the 500 series	28-29
Math. 111, 112, 213	15
Total Hours	43-44

B. College of Physical and Engineering Science Requirements

At least eighteen semester hours in the College of Physical and Engineering Sciences in addition to the mathematics requirements stated above 18

It is recommended that those planning to do graduate work in statistics also take Math. 541 and 542.

Requirements for an Undergraduate Minor

Fourteen semester hours in statistics including Statistics 336 and 337 .. 14

Suggested Program for Statistics Majors**Freshman Year**

	Hours
Relig. 121, 122	4
Phys. ed.	1
Health 130	2
Eng. 111 and 112 or 115 and 116	4-6

Math. 111 and 112	10
Hist. 170	3
Gen. ed. and elective courses	8-10
Total Hours	34

College of Business Majors**Sophomore Year**

	Hours
Relig.	4
Phys. ed.	1
Math. 213	5
Acctg. 201 and 202	6
Statistics 221 or 321, 241	4-5
Econ. 111, 112	6
Gen. ed. and elective courses	7-8
Total Hours	34

Statistics 330	3
Other statistics, gen. ed. and elective courses	18
Total Hours	34

Senior Year

	Hours
Relig.	4
Acctg. 342	3
Bus. Mgt. 348	3
Statistics 522, 531, 541 (one course)	3
Other statistics, gen. ed. and elective courses	21
Total Hours	34

College of Physical and Engineering Sciences Majors**Sophomore Year**

	Hours
Relig.	4
Phys. ed.	1
Statistics 221 or 321, 241	4-5
Math. 213	5
Phys. and eng. sci.	11-13
Gen. ed. and elective courses	7-9
Total Hours	34

Other statistics, gen. ed. and elective courses	17-19
Total Hours	34

Senior Year

	Hours
Relig.	4
Statistics 421, 422	6
Statistics 522, 531, 541 (two courses)	6
Other statistics, math., phys. sci., gen. ed., and elective courses	18
Total Hours	34

Junior Year

	Hours
Relig.	4
Phys. and eng. sci.	5-7
Statistics 336, 337	6

Speech

Professors: Bateman, Morley.

Associate

Professors: Clinger (chairman, F-5574 FAC),
Baer.

Assistant

Professors: Jex, Pardoe, Richardson, Weaver.

Instructors: Boren, Smith.



The Department of Dramatic Arts and the Department of Speech are each administratively independent of the other; however, in order to more completely prepare the student for teaching in the schools and to meet competition in professional theatre, radio, and television, the faculty members and courses from both departments are utilized to achieve these purposes.

The following are courses required of all majors within both the Department of Dramatic Arts and the Department of Speech with the exception of Dram. Arts 460 and Speech 491 for speech and hearing majors.

Dram. Arts 121, 460.

Speech 101, 271, 491.

The High School Teacher

Those students wishing to qualify as teachers in the high schools will complete the following courses and receive the joint recommendation of the Department of Dramatic Arts and the Department of Speech. The required courses are

	Hours
Commun. 255	2
Dram. Arts 121, 123, 126, 319, (320-321—2 hours) 325, 460	16
Speech 101, 111, 271, 305, 401, 491, 527	16
Total Hours	34

Additional courses recommended:

Dram. Arts 315, 564, 565, 423.

Speech 360, 402, 524 or 525.

Teaching Minor:

Dram. Arts 121, 319, 1 hour from 320 or 321, 325, 460.

Speech 101 or 102, 111 or 305, 491, 527.

Teaching Minor for Elementary Teachers:

Dram. Arts 460, 572 or Speech 305.

Speech 101 or 102, 305 or Dram. Arts 572, 366, 491, 527 (A minimum total of 14 hours is required.)

Speech 491 is required of all majors and minors in both departments (except speech and hearing majors). Required courses may be waived only on acceptance of the student's petition by the department waiver committee.

Mask Club is sponsored by both departments to provide practical experience and participation in all of the speech arts. It is held each Monday night from 7:00 to 8:00 p.m. in the Experimental Theatre.

Requirements for Minor:

The requirements for a general minor in dramatic arts and speech must be selected from the following courses:

Dram. Arts 121, 319, 1 hour from either 320 or 321, 325, 460.

Speech 101 or 102, 111 or 305, 491, 527.

The B.A., B.S., M.A., and M.S., degrees are offered by the department. Students may elect to specialize in public address, speech education, or speech and hearing.

Areas of Concentration

Public Address:

Basic Courses:	Hours
Dramatic Arts 121, 460	8
Speech 101, 271, 491	7
Required for specialization:	
111, 305, 401, 402, 7 or 8 hours of electives from Dram.	
Arts 123, 255, 325, or Speech 523, 524, 525, 527, 590	16-18
Total Hours	31-33

Additional courses recommended:

Speech 360; course in American history and government.

Note: A nonteaching minor of selected courses in public address may be obtained with the approval of the chairman of the Department of Speech.

Sequence of Courses

	F	S
First Year	101 (3)	121 (3)
Second Year	111 (2)	255 (2)
	305 (3)	271 (2)
Third Year	401 (2)	402 (2)
	460 (3)	
Fourth Year		491 (2)

Speech Pathology-Audiology and Speech Science

(Also known as Speech Correction or Speech Therapy)

I. Courses leading to the baccalaureate degree:

Basic courses:	Hours
Speech 101 or 102, 271, and Dram. Arts 121	7-8
Requirements for specialization:	
Speech 270, 360, 361, 362, 373, 374, 446, 449, 483	24-27
Total Hours	31-35

II. Additional Courses needed for various types of certification:

A. Utah State Department of Public Instruction Non-Renewable Certificate for Public School Speech and Hearing Correctionist: Courses leading to the Baccalaureate degree, as listed above, plus a minor in teacher education:

Tchr. Ed. 310, 403, 415, 460, 548; Health Ed. 361; Psych. 340; and Speech 475. Consult with your adviser about any possible changes in these requirements and the possibility of a double major in speech pathology-audiology and teacher education.

B. The New American Speech and Hearing Association Single Certificate, effective January 1, 1965, may be obtained from a five-year program at B.Y.U.

III. Recommended minor for speech pathology-audiology majors, on the undergraduate level, is teacher education or psychology. Other minors are acceptable. Recommended minor for speech pathology-audiology majors on the graduate level is counseling and guidance, educational psychology, or psychology minor. Other minors are acceptable.

IV. Requirements for a minor in speech pathology, audiology, and speech science are: Speech 271, 361 or 373, 362, and 2 semester hours of 483; plus a minimum of five additional hours chosen from the following courses: Speech 270, 360, 361, 373, 374, 446, 449, 545, 101 or 102; Dram. Arts 121. These courses are designated with an (m).

Sequence of Courses

Fall

Sophomore: Speech 101 or 102, 270, 271

Junior: Speech 373, 483, 446

Senior: Speech 475*; Tchr. Ed. 548*

OR

Junior: Speech 101 or 102, 270, 271, 373, 362

Senior: Speech 483, 446

Spring

Speech 361, 362; Dram. Arts 121

Speech 360, 374, 483, 449

Additional courses toward the 5-year program.

Speech 360, 361, 374, 483, Dram. Arts 121

Speech 449, 475*, Tchr. Ed. 548*

*Speech 475 and Tchr Ed. 548 are part of the teacher education minor. See your adviser about the sequence of courses for your minor.

Public School Certification

For those seeking certification as public school speech and hearing correctionists, the general elementary credential is currently required. Inasmuch as changes in the State Certification Office are currently being considered, each student should contact the Teacher's Certification Office in the McKay Building for up-to-date information on registration and certification requirements.

Courses

58. **Speech for Foreign Students.** (0:5:0) F.S. Morley
60. **Remedial Speech** (0:0:3) F.S. Morley
A noncredit, nonfee service course for college students who have speech and/or language problems. Corrective treatment of disorders such as articulation and stuttering.
101. **Fundamentals of Speech.** (3:3:1) F.S. (m) Staff
Beginning course to aid self-improvement in speech as a mode of communication. Provides opportunity to practice for greater effectiveness in personal use of the various speech skills. Recommended for speech majors, prospective teachers and students who desire improvement in their everyday speech activities.
102. **Introduction to Public Speaking.** (2:2:1) F.S. (m) Staff
Practical service course designed to improve speech efficiency, self-confidence, and skill in organization and delivery of all types of speeches encountered in business, professional, social, and religious activities.
- 105p. **Speech Clinic.** (1:1:0) F.S. Baer, Jex, Morley, Weaver
Students may register for a total of 4 hours of credit in this course. Corrective treatment of articulation, stuttering, and other speech disorders. Fee charged. See department chairman for fee schedule.
111. **Introduction to Argument and Debate.** (2:2:2) F.S. Boren, Richardson
Principles of argumentation and practice in debate.
- 112, 113. **Debate Technique.** (1:1:1 ea.) F.S. Boren, Richardson
Open to members of the forensic squad who obtain approval of the Speech Department and debate council. To obtain credit in debating, students must register for this course with at least two hours of instruction per week.
270. **Speech Science.** (2:2:1) F.Su. (Offered 1965-66 and alternate years) (m) Baer
An investigation into the basic processes underlying speech and audition through experiment and instrumentation.
271. **Introduction to Speech Correction and Aural Rehabilitation.** (2:2:1) F.S.Su. (m) Jex
Consideration of the characteristics of normal speech and hearing and the deviations therefrom. The need, nature, and development of programs to correct speech and hearing disabilities.

- 301, 302. Debate Techniques.** (1:1:1 ea.) F.S. Boren, Richardson
Open to members of the forensics squad who obtain approval of the Speech Department and the debate council. To obtain credit in debating, students must register for this course with at least two hours of instruction per week.
- 304p. Public Speaking.** (1:1:0) F.S. Staff
Individual instruction. Special fee.
- 305. Discussion and Conference Leadership.** (3:3:0) F.S. Boren, Richardson
Concerned with basic democratic procedure for cooperative thinking. Offers experience in business and industrial conference leadership. For those who serve on committees or boards; conduct classroom sessions; conduct staff meeting; talk over and resolve common problems in church, school, or office; and for all who are preparing to participate in or lead informal discussion in small groups.
- 360. Practical Phonetics.** (2:2:0) S.Su. (Offered 1964-65 and alternate years) (m) Staff
- 361. Speech Pathology.** (3:3:0) F.S.Su. Home Study also. (Offered 1965-66 and alternate years) (m) Prerequisite: Speech 271. Morley
Causes, differential diagnosis, and approaches to clinical treatment of the functional disorders of speech; procedures in counseling of parents of speech cases; the speech correction kit.
- 362. Introduction to Clinical Methods and Practicum in Speech and Hearing Therapy.** (2:1:3) F.S.Su. (Offered 1964-65 and alternate years) (m) Baer
Introduces beginning clinicians to therapy in a gradual, systematic manner through observations, lesson planning, limited practicum, and awareness of appropriate materials, tests and methods. (Formerly 483)
- 366. Speech in Elementary School.** (2:2:0) S. Home Study also. Jex
Objectives and methods of developing good speech habits in children. Recognition and management of minor speech problems.
- 373. Introduction to Audiology.** (3:3:2) F.S. (m) Prerequisite or concurrent: Speech 271. Weaver
For prospective teachers and clinicians in speech correction and audiology as well as public health nurses. A survey of the physical, physiological, medical and psychological aspects of hearing impairment and the effects of these upon language development. Included are audiometric screening, case finding and referral, interpretation of audiograms, description and use of hearing aids, as well as the educational, psychological, and social aspects of aural rehabilitation.
- 374. Speech Reading and Auditory Training.** (2:3:0) S. (m) Prerequisite: Speech 373 or concurrent registration in Speech 373 with consent of instructor. Weaver
Rationale and methods for teaching lipreading to acoustically handicapped children or adults with emphasis on auditory training as a supplement to speech reading in the receptive language process. Observation required.
- 377. Secondary Teaching Procedures.** (3:3:1) F.S. Prerequisite: Tchr. Ed. 301. Clinger
Lectures, demonstrations, observations.
- 401. Advanced Public Speaking.** (2:2:0) F.S. Prerequisite: Speech 101. Clinger, Bateman
Advanced study and practice in techniques of speaking.
- 402. Advanced Argument and Debate.** (2:2:0) S. Prerequisite: Speech 111. Bateman, Boren, Richardson
Analysis of classic debates and practice in argumentative writing and speaking.

- 321. Elementary Reading Methods.** (3:3:0) F.S.Su. Prerequisites: Tchr. Ed. 301, 320. H. Young, Staff
For prospective elementary teachers. An extension of Tchr. Ed. 320, with special application to reading and arithmetic.
- 322. Elementary Arithmetic Methods.** (2:2:0) F.S.Su. Prerequisites: Tchr. Ed. 301, 320. Brown, Staff
Methods and procedures of teaching arithmetic in the elementary grades. Students are provided experiences with the number system, the four basic fundamental processes, and problem solving. Instruction in methods of making these processes meaningful to children.
- 324. Arts and Crafts for Elementary Teachers.** (2:2:1) F.S.Su. Alder, Staff
Simple weaving, puppetry, paper mâché, clay modeling, and other activities suitable for children. These activities are suited to grades three through six.
- 325. Arts and Crafts for Early Childhood.** (2:2:1) F.S.Su. Alder, Staff
Exploring ideas and materials for the young child (nursery school, kindergarten through third grade).
- 326. Arts and Crafts Laboratory.** (1:0:3) F.S.Su. Staff
An optional laboratory for those who wish to pursue individual interests in crafts for children. The emphasis is on ceramics.
- 338. Handwriting.** (1:1:0) F.S.Su. Staff
Develops skill in manuscript, cursive, and blackboard writing for elementary teachers.
- 340. Children's Literature.** (2:2:0) F.S.Su. Bowles, Staff
Evaluation of significant books, past and present, that meet children's needs.
- 354. Methods and Materials of Instruction in Secondary Schools.** (3:3:0) F.Su. Staff
Designed to meet certificate needs of secondary teachers in Idaho.
- 377. Secondary Teaching Curriculum and Methods.** (3:3:1) F.S.Su. Prerequisite: Tchr. Ed. 301. Belt, Staff
Identification of teacher and pupil activities required for conceptual learning and for each of the following types of subject matter and teaching: symbolic, performance ability, and habit. Lectures, demonstrations, and participation in noninstructional activities at a high school. (Students should arrange their class schedules to permit approximately 14 hours for directed observation and participation in the laboratory school during the 8:00 a.m. hour through the 3:15 p.m. hour.)
- 403. Development and Learning.** (4:4:0) F.S.Su. Prerequisite: Tchr. Ed. 449 or 479. Harrison, Staff
Designed to give the student an understanding of the psychological facts, principles, and concepts related to the teaching-learning situation. Attention is given to such topics as the learning process, readiness, individual differences, motivation, and evaluation.
- 406. Teaching Materials Laboratory (Audio-Visual Aids).** (2:2:1) F.S.Su. Brown, Tyndall
Introduction to and production of audio-visual aids by individuals.
- 415. Educational Values.** (2:2:0) F.S. Home Study also. Hardy, Staff
Identification and analysis of fundamental American values and of value systems upon which American educational objectives should be based. Problems and concepts encountered in earlier courses in the educational sequence are examined in the light of the values studied.
- 422. Kindergarten Proficiency.** (2:2:0) F.S.Su. Campbell, Miller, Staff
Organization of programs, lesson planning, methods and materials, and best practice in early childhood education (ages four to nine) with emphasis on the theory and practice in kindergarten. (Requirement for H.D.F.R. majors and for certification in kindergarten proficiency.)

- 449. Elementary Student Teaching.** (4-8:0-20-40) F.S. Prerequisites: Tchr. Ed. 301, 320, 321. Wilcox, Staff

Designed to develop readiness for full comprehension of the principles of teaching and the remaining subject-matter and education courses. Special attention to on-the-job lesson planning and unit organization. Seminar on student teaching problems is held weekly. (A laboratory fee of \$45.00 is charged, payable upon application for student teaching.)

An application for a special assignment must be filed with Student Teaching Office one semester in advance of receiving an assignment. Student teachers are expected to do responsible teaching, participate in co-curricular activities, and keep in close contact with the faculty and students in a public school, as well as to participate in seminars and conferences with their supervisors. During this period of student teaching, the student must limit his load to the student teaching registration only. A minimum of 180 clock hours in actual charge of the class is required.

- 460. Education of Exceptional Children.** (3:3:0) F.S.Su. Harrison, Wilson
A general course designed to acquaint the student with the causes, recognition, incidence and characteristics of all types of exceptional children. Designed to meet needs of both classroom teacher and person going into special education.

- 461. Introduction to Teaching the Mentally Retarded.** (2:2:0) F.S.Su. Wilson
Prerequisite: Tchr. Ed. 460.

Introductory course in education of mentally retarded children; study of classification and characteristics of the retarded, and general problems in their care, management, and education. Required for certification for teachers of mentally retarded.

□ **Zoology 462. Pathology of Organs of Vision.** (2:2:0)

- 463. Standard English Braille.** (4:4:0) Arr. Staff
Systematic presentation of Braille for those who intend to teach the visually handicapped or do volunteer transcribing. Not a course in touch reading.

- 464. Arts and Crafts for the Handicapped.** (2:2:1) F.Su. Staff
Arts and crafts and other media as they may be adapted to meet the needs of individuals with disabilities.

- 465. Introduction to Teaching the Physically Impaired.** (2:2:0) S.Su. Wilson
Prerequisite: Tchr. Ed. 460.

Introductory course for teacher of the physically handicapped; types and causes of physical impairment in children; and general problems of care and education of these children. Required for certification for teachers of physically handicapped.

- 466. History, Education, and Guidance of the Auditorially Handicapped.** (2:2:0) Staff
Prerequisite: Speech 271.

Background and history of education and guidance for student with auditory handicaps. Required for certification for teachers of the deaf.

- 467. Teaching of Speech to the Deaf.** (4:4:0) F. Prerequisites: Speech 271, 373. Staff

Principles and procedures of teaching speech to the deaf. Required for certification for teachers of the deaf.

- 468. Teaching of Language to the Deaf.** (4:4:0) S. Prerequisites: Speech 271, 373. Staff

Knowledge of the various systems of teaching language to the deaf and the methods and procedures used in teaching language to the deaf. Required for certification for teachers of the deaf.

- 469. Methods of Teaching Elementary School Subjects to the Deaf.** (2:2:0) S. Prerequisites: Speech 271, Tchr. Ed. 460. Staff

Techniques used in teaching reading, arithmetic, social studies, science, and elementary school subjects to the deaf. Required for certification for teachers of the deaf.

- 479. **Secondary Student Teaching.** (4-8:0:20-40) F.S. Prerequisites: Tchr. Ed. 301, 377. Wilcox, Staff

Designed to develop readiness for full comprehension of the principles of teaching and the remaining subject-matter and education courses. Special attention to on-the-job lesson planning and unit organization. (A laboratory fee of \$45.00 is charged, payable upon application for student teaching.)

An application for a specific assignment must be filed in the Student Teaching Office one semester in advance of receiving an assignment. Student teachers are expected to do responsible teaching, participate in co-curricular activities, and keep in close contact with the faculty and students in a public school as well as to participate in seminars and conferences with their supervisors. During this period of student teaching, the student must limit his load to the student teaching registration only. A minimum of 120 clock hours in actual charge of the class is required.

- 490, 491. **Seminar.** (1-2:1-2:0 ea.) F.Su. Alley

- 493, 494. **Independent Reading.** (1-2:1-2:0 ea.) F.S.Su. Alley

Preparation for Special Education Teachers

The College of Education offers professional courses leading to certification in special education for exceptional children in several areas. Students desiring certification must meet course requirements in the following areas:

1. **General Education.** Complete University graduation requirements. (See the general education requirements in the Student Academic Services section of this catalog.) In the various areas of specialization certain courses are recommended to fill group requirements. Students should consult the coordinator of special education for suggestions.

2. **An approved minor or composite minor in a subject-matter area.** (14 semester hours.) Recommended minors are

Psychology

Sociology

H.D.F.R.

Speech

Industrial Education

Psychology-Sociology

H.D.F.R.-Psychology

H.D.F.R.-Sociology

Health-Physical Education

Health-Recreation

Homemaking Education (allowed only for students in special education)

3. **Professional elementary or secondary education.** Required courses to fulfill the state and University requirements for either elementary or secondary certification. (See the relevant sections of this catalog.)

4. **Special Education.** Courses required for provisional certification in all areas.

	Hours
Tchr. Ed. 460. Education of Exceptional Children	3
*Tchr. Ed. 464. Arts and Crafts for the Handicapped	2
*Speech 271. Introduction to Speech and Hearing Rehabilitation	2
Grad. Ed. 568. Observation and Participation in Special Education	1-2
Grad. Ed. 569. Practicum in Special Education	2-4
*One or both depending on area of specialization	

5. **Areas of specialization.** Courses in areas of specialization must include the following:

Intellectually Handicapped:

Tchr. Ed. 461. Introduction to Teaching the Mentally Retarded 2

Grad. Ed. 567. Problems in the Education of the Mentally Retarded 3

Students who certify in secondary education should also take methods courses in teaching elementary reading and arithmetic.

	Hours
Motor Handicapped:	
Tchr. Ed. 465. Introduction to Teaching the Physically Handicapped	2
Grad. Ed. 566. Problems in the Education of the Orthopedically Handicapped	3
Blind:	
Tchr. Ed. 463. Standard English Braille	4
Zool. 374. Pathology of Organs of Vision	2
Grad. Ed. 563. Problems in the Education of the Visually Handicapped	3
Partially Seeing:	
Zool. 374. Pathology of Organs of Vision	2
Grad. Ed. 563. Problems in the Education of the Visually Handicapped	3
Hard-of-Hearing:	
Speech 373. Introduction to Audiology	3
Speech 374. Speech Reading and Auditory Training	2
Speech 446. Anatomy of the Ear and Vocal Organs	2
Deaf:	
A. Bachelor's Degree.	
B. Professional Education Core (12 semester hours minimum).	
*1. Health 361: School Health for Elementary Teachers	2
or Health 362: School Health for Secondary Teachers	2
**2. Tchr. Ed. 301: Basic Concepts of Teaching	2
*3. Psych. 340: Mental Hygiene	2
**4. Tchr. Ed. 320: Elementary Teaching Procedures	3
*5. Tchr. Ed. 403: Development and Learning	4
*6. Tchr. Ed. 310: The State, the School and the Teacher	2
*7. Tchr. Ed. 415: Educational Values	2
**8. Art 226: Art for Elementary Teachers	2
**9. Phys. Ed. 375 or 376: P.E. for Elementary Teachers	2
**10. Tchr. Ed. 340: Children's Literature	2
C. Tchr. Ed. 460: Education of Exceptional Children	3
D. Specialized Training	
* Required	
** Recommended	

Provisional Certificate — 12 semester hours

	Hours
1. Speech 271: Introduction to Speech Correction and Aural Rehabilitation	2
2. Speech 446: Anatomy of the Ear and Vocal Organs	2
3. Tchr. Ed. 468: Teaching of Language to the Deaf	4
4. Tchr. Ed. 467: Teaching of Speech to the Deaf	4
5. Tchr. Ed. 568: Observation and Participation in Special Education	2
6. Speech 373: Introduction to Audiology	3
7. Speech 374: Speech Reading and Auditory Training	2

PREPARATION OF ELEMENTARY SCHOOL TEACHERS

The department offers a comprehensive program which will satisfy requirements for an elementary teaching certificate as well as graduation requirements for students registered in the College of Education. The candidate for certification must meet University graduation requirements.

The program consists of four elements:

1. The arts and sciences majors for elementary school teachers, which also satisfies the University requirements for general education.
2. The subject-matter minor, a material contribution to the student's academic competence and chances for employment.
3. The professional preparation, which includes 30 semester hours of designated professional education courses, constituting a major in elementary education.

Courses of Related Interest:

Acctg. 456, 557.
 An. Sci. 601.
 Bot. 176, 376.
 Bus. Mgt. 558, 559.
 Econ. 588, 682.
 Eng. Tech. 352.

Grad. Ed. 552, 554.
 Math. 311, 312, 313, 332, 334, 336,
 372, 387, 435, 485, 541, 542.
 Phil. 381, 483.
 Psych. 370, 670, 671.
 Sociol. 320, 524, 701.
 Zool. 176, 376, 576.

Courses

- 221. Principles of Statistics.** (3:3:0) F.S.Su. (m) Prerequisite: Math. 101 or 105 or equivalent. Carter, Hilton, Nielson

Frequency distributions; measures of central tendency and dispersion; elementary probability; regression and correlation; sampling; elementary statistical inference including the normal, Student's "t," chi-square, and analysis of variance tests.

- 241. Elementary Probability.** (2:2:0) F.S.Su. (m) Prerequisite: Math. 111 or 105; recommended: Statistics 221 or 321. Carter, Faulkner, Hilton

Combinations; permutations, Bayes formula; binomial, Poisson, multinomial, and hypergeometric distributions; combinatorial probability.

- ☐ **Mathematics 311. Computers.** (3:1:6)

- ☐ **Mathematics 312. Numerical Analysis.** (3:3:0)

- 321. Elementary Mathematical Statistics.** (2:2:0) F.S.Su. (m) Prerequisite: Math. 213 or Acctg. 332. Faulkner, Nielson, Richards

Same material as Statistics 221, using calculus primary for majors in the physical and engineering sciences.

- 330. Statistical Methods Used in Business.** (3:3:0) F.S. (m) Prerequisite: Statistics 221 or 321 or equivalent. Carter, Nielson

Advanced time series analysis; growth curves; multiple correlation; forecasting; sample survey methods; introduction to operations analysis; introduction to sampling inspection and quality control.

- 336. Statistical Methods Used in the Sciences I.** (3:3:0) F. (m) Prerequisite: Statistics 221 or 321 or equivalent. Carter, Hilton

Estimation and tests of hypothesis; analysis of variance, including multiple range tests and orthogonal comparisons; introduction to experimental design; multiple and partial regression.

- 337. Statistical Methods Used in the Sciences II.** (3:3:0) S. (m) Prerequisite: Statistics 336. Carter, Hilton

Analysis of covariance and multiple covariance; multiple range tests and orthogonal comparisons in covariance analysis; sampling; nonparametric methods including contingency, sign, runs, and rank tests; rank correlation and partial rank correlation.

- ☐ **Engineering Technology 352. Advanced Digital Computers.** (3:2:2)

- 421, 422. Theory of Statistics I and II.** (3:3:0 ea.) F.S. (m) Prerequisite: Statistics 221 or 321, Math. 213 or equivalent; recommended: Statistics 241. Faulkner, Nielson, Richards

Development of distribution theory from the theory of probability; common discrete and continuous distribution functions including derived sampling distributions; tests of hypotheses and estimation using the principles of maximum likelihood.

- 432. Quality Control and Industrial Statistics.** (3:3:0) F.S. (m) Prerequisite: Statistics 221 or 321; recommended: Statistics 330. Richards

Quality control, sampling inspection and sequential analysis, industrial experimentation.

- 433. Operations Analysis.** (2:2:0) S. (m) Prerequisite: Math. 112 or equivalent; recommended: Statistics 221, 321, or 241. Nielson, Richards

Mathematical decision-making processes including linear programming game theory, inventory and replacement models, sequencing and scheduling procedures.

□ **Accounting 456. Electronic Computer Programming.** (3:3:0)

- 501. Statistics for Research Workers.** (5:4:3) F.S.Su. Prerequisites: Math. 105 or equivalent. Carter, Hilton

Probability, estimation, confidence intervals, tests of hypotheses, regression, analysis of variance and nonparametric methods. Designed for graduate students majoring in the natural or social sciences.

- 511. Advanced Computer Methods in Statistics.** (3:1:6) F. Prerequisites: Math. 311, Statistics 330 or 337 or 501. Carter, Dean, Hilton

Application of digital computers to statistical problems including analysis of variance, multiple regression, analysis of covariance, factorial experiments, response surfaces, Monte Carlo simulation, linear programming, etc.

- 522. Theory of Linear Models.** (3:3:0) S. Prerequisites: Statistics 421, 422.

Nielson, Richards
Mathematical theory of statistics; including linear hypotheses, theoretical distribution functions, expected value, sufficient statistics, maximum likelihood estimators, etc.

- 531. Experimental Design.** (3:3:0) F. Prerequisites: Statistics 221, 321 or 501; recommended: Statistics 336. Carter, Hilton

Randomized blocks, Latin squares, factorial designs, fractional replication, confounding and incomplete blocks.

- 541. Advanced Probability.** (3:3:0) S. Prerequisites: Math. 213, Statistics 421. Faulkner, Nielson

Recurrent events, runs and sequences, advanced combinatorial methods, random walk, queuing and Monte Carlo methods, introduction to Markov chains and sequential processes.

□ **Accounting 557. Advanced Computer Programming.** (2:2:0)

□ **Animal Science 601. Experimental Techniques and Design.** (2:2:0)

- 621. Advanced Theory of Statistics I.** (3:3:0) F. Prerequisites: Math. 542, Statistics 422; recommended: Statistics 522, or permission of instructor. Faulkner, Nielson, Richards

Advanced topics in the theory of estimation, testing hypothesis, multiple regression, multivariate analysis.

- 622. Advanced Theory of Statistics II.** (3:3:0) S. Prerequisites: Statistics 621. Faulkner, Nielson

Continuation of Statistics 621.

- 623. Analysis of Variance.** (3:3:0) F. Prerequisites: Statistics 422, Math. 372 or Statistics 522 or equivalent. Faulkner, Nielson

Theory of analysis of variance for fixed effects, random effects and mixed models including two-three and higher-way layout, Latin squares, incomplete blocks, and nested designs.

- 631. Advanced Experimental Design.** (3:3:0) S. Prerequisites: Statistics 422, 531; recommended: Statistics 522. Carter, Hilton, Nielson

Advanced topics in experimental design including the general p-level factorial, Youden squares, balanced incomplete blocks, response surfaces, lattice design.

- 632. Advanced Industrial Statistics and Reliability.** (3:3:0) S. Prerequisites: Statistics 422, 432, or equivalent. Nielson, Richards
Advanced topics in sequential sampling, tolerance limits, life testing, and reliability.
- 634. Advanced Theory of Sampling.** (3:3:0) S. Prerequisite: Statistics 422. Faulkner, Nielson, Richards
Advanced topics in the theory of sampling.
- 636. Advanced Statistical Methods.** (3:3:0) F. Prerequisites: Statistics 337, 422. Carter, Hilton, Richards
Advanced topics in estimation, confidence intervals, tests of hypotheses including distribution-free methods, truncated distributions, order statistics.
- 641. Advanced Topics in Probability I.** (3:3:0) F. Prerequisites: Math. 542, Statistics 422, 541. Staff
Advanced topics in Markov chains, stochastic processes and information theory.
- 642. Advanced Topics in Probability II.** (3:3:0) S. Prerequisites: Math. 542, Statistics 541, 621; recommended: Statistics 641, Math. 641. Staff
A measure theoretic approach to probability including Borel sets, characteristic functions, measure spaces, measurable functions, theorem of Fubini, Radon-Nikodym, etc.
- 690A,B. Special Topics in Statistics.** (3:3:0 ea.) F.S.Su. Prerequisites: consent of instructor. Staff
Specialized topics in statistics varied from time to time.
- 695. Reading in Statistics.** (1-2:1-2:0) F.S. Prerequisite: consent of department. Staff
- 699. Thesis for Master's Degree.** (1-6:Arr.:Arr.) F.S.Su. Prerequisite: consent of department. Staff
- ☐ **Sociology 701. Advanced Statistical Methods.** (2:2:0)



Receiving instruction in use of statistics

Teacher Education



Professors: Alley (chairman, 153 McKay), Berryessa, Clarke, Read, Smith, Woolf.

Associate Professors: Babcock, Barnett, Bauer, Belt, Campbell, Crnkovic, Daines, Harris.

Assistant Professors: Alder, Baird, Brown, Flandro, Hammond, Hardy, Harmon, Harms, Harrison, Ord, Tyndall, Wilcox, Wilson.

Instructor: Williams.

Clinical Instructors: Bennett, Bowles, Carlisle, H. Clark, W. H. Clark, Davidson, deJong, Jacob, Miller, Young.

The Teacher Education Department is organized to develop effective and capable teachers. Courses sponsored by this department are designed to help students understand children, organize materials, and acquire the knowledge, skills, and attitudes of effective teachers.

The department trains teachers in three areas: special education, elementary education, and secondary education.

For admission to the teacher education program students are required to meet certain criteria, among which is a 2.25 B.Y.U. cumulative grade-point average.

Courses

300. Teaching in the Church. (2:2:0) F.S. Staff
Equivalent to the Church teacher training program. Does not apply toward state certification.

301. Basic Concepts and Principles of Teaching. (2:2:1) F.S.Su. Baird, Belt, Davidson
For potential elementary and secondary teachers, regardless of level or field. An exposition of a simple and operational concept of teaching consisting of three elements: the objective, the learning experience, and receptiveness to learning.

304. Educational Psychology. (2:2:0) F.S.Su. Home Study also. Prerequisites: Tchr. Ed. 449 or 479; H.D.F.R. 210; Psych. 320 or 321. Bauer, Harrison
Enrollment limited to homemaking education majors and those with composite majors which include psychology. Others should receive special permission from the instructor. Psychological facts, principles, and concepts related to the teaching-learning situation are covered.

310. The State, the School, and the Teacher. (2:2:0) F.S.Su. (m) Staff
Understanding the school and its relationship to the community, the state and the nation; how schools are organized and administered, with emphasis on Utah school organization and Utah school laws.

320. Basic Classroom Methods. (3-4:3:0) F.S.Su. Prerequisite: Tchr. Ed. 301. Staff
For prospective elementary teachers. Identification of teacher and pupil activities required for conceptual learning and for the following related types of subject matter and teaching: symbolic, performance ability, and habit. Also, lectures, demonstrations, and participation in noninstructional activities at an elementary school.

Mathematics
 Physics
 Music education
 Health, driver education, and recreation:
 Health
 Recreation
 Safety and driver education

Social sciences:
 Geography, history, and one of the following:
 Economics
 Political science
 Psychology
 Sociology

Courses Required for Teaching Majors, Teaching Minors, and Composite Teaching Majors

Accounting:

26-Hour List (Major): 201, 202, 301, 302, 312, 475; and eight or more hours selected from 342, 355, 420, Bus. Ed. 206.

18-Hour List (Minor, dominant or related subject): 201, 202, 301; and nine or more hours selected from 302, 312, 342, 355, 420, 475.

Agricultural Education (Composite major - 62 hours)

Plant Sciences (20 hours)

Agron. 151, 282

Six hours from Hort. 101, 103, 312, 350.

Six hours from Agron. 302, 305, 308, 340, 351, 455; Hort. 340, 402, 471; Bot. 462.

Animal Sciences (15 hours)

An. Sci. 153, 207.

Electives (any animal science course)

Agricultural Economics (11 hours)

112, 325, 410.

Farm Mechanics (16 hours)

16 hours from Indus. Ed. 125, 188, 189, 210, 218, 317, 341; Drawing 111.

Art

57-Hour List (Composite Major): Starred (*) courses must be completed before attempting upper division work. Basic requirements: *120, *121, *122. General requirements: At least 8 hours selected from 306, 307, 208, 310, 403, 405.

Dominant and supporting fields: The student will complete 16 hours in one of the following three groups as a dominant field and 12 hours in each of the other two fields.

1. Crafts and sculpture (plastic and graphic): *250, *256, *263, 312, 350, 352, 356, 358, 359, 361, 362, 366.
2. Drawing and painting: *227, *233, 321, 322, 327, 329, 333, 335, 474, 476, 580, 582.
3. Commercial art and interior design: *239, 314, 341, 342, 343, 415, 417, 444, 446, 447, 448.

43-44-Hour List (Major): Starred (*) courses must be completed before attempting upper division work except art history. Lower division: *120, *121, *122, *227, *233, *239, *250, *256, *263. Upper division: Six hours of art history: 321 or 322; 327 or 333; 312 or 342 or 341; 350 or 352 or 366; 356 or 358 or 359 or 361; and six hours of electives chosen from 310 or any class listed above but not previously elected by the student.

29-Hour List (Minor): Starred (*) courses must be completed before attempting upper division work except art history. Lower division: *120, *121, *227, *233, *239, *250, *256, *263. Upper division: 306, and 8 hours selected from 310, 312, 314, 321, 327, 335, 341, 342, 350, 359, 362, 366.

Biology: May not be used as a teaching major.

Note: Occasionally students completing a teaching major in agriculture, chemistry, or physical education or other areas are requested to teach high

school biology as well as their major field. In order to insure that these people have an adequate and balanced training to give them some measure of competence in teaching a high school biology course, the following biology minor is prescribed:

22-23-Hour List (Minor): Bot. 101, 105, 276 or Zool. 276; Zool. 105, 212. Two courses from the following: Bact. 321; Bot. 110, 440; Zool. 261 concurrently with 262 or 263; 230. Bot. 376 may be taken in place of Bot. 276 or Zool. 276.

This may not be used as a minor when Botany or Zoology are selected as the major or minor. See Botany and Zoology for teaching majors.

Botany: (Biology major for secondary teachers, also see zoology.)

Note: The preparation and certification of teachers in biology in secondary schools is a cooperative program between the departments dealing with the biological sciences and the College of Education.

26-Hour List (Botany Major): Bot. 101, 110, 205, 321, 331, 376, 490, 440, 450.

Required supporting courses for biology teachers: Bact. 321, 322; Math. 101; 105, and 106 or 111; one year of chemistry beyond Chem. 100, preferably Chem. 105 and 106 or 111 and 112.

Recommended supporting courses: Agron. 282; Bact. 501; Bot. 335, 455, 460; Geol. 111, 112; organic chemistry.

16-Hour List (Botany Minor): Bot. 101, 105, 110; seven hours selected from Bot. 205, 225, 321, 440, 450, 460.

19-Hour List (Zoology Minor): Zool. 105, 230, 261, 262 or 263, 343 or 345, 346 or 347, 372, 285.

Business Education:

35-Hour List (Major): 203, 204, 206, 220, 300, 311 or 411, 312, 320, 370, 475, 485 or 486, and at least six hours selected from courses offered in the College of Business exclusive of the teaching minor.

Note: In order to qualify for a teaching major in business education, graduates of the College of Business must complete (a) the teaching major and a teaching minor in the College of Business and (b) Acctg. 201, 202; and Econ. 101 or 111.

21-Hour List (Minor, dominant, or related, subject): 112, 203, 206, 220, 311, 320, 370.

Chemistry:

30-34 Hour List (Major): 111 and 112 (or 105, 106, and 223), 351, 352, 354 (1 hr.), 355 (1 hr.), 461, 462, 464, 465, 491, 594 (A&B), and either 514 or 521.

18-26 Hour List (Minor, dominant or related subject): 111 and 112 (or 105, 106, 223, and 151), 351, 352, 354 (1 hr.), and 335 (1 hr.).

Dramatic Arts and Speech:

34-Hour List (Major):

Dram. Arts: 121, 123, 126, 319, two hours from 320 or 321; 325, 460.

Speech: 101, 111, 271, 305, 401, 491*, 527.

Commun.: 255 (Radio & T.V.).

19-21 Hour List (Minor, dominant, or related subjects):

Dram. Arts: 121, 319, one hour from 320 or 321, 325, 460.

Speech: 101 or 102, 111 or 305, 491*, 527.

***Note:** 491 is required of all majors or minors except those majoring in speech and hearing.

Economics:

30-Hour List (Major): Two of the following three courses: 101, 111, 112; 274, 311, 312; and 15 hours selected from 341, 358, 402, 430, 453, 461, 462, 471, 482, 488, 511, 512, 515, 576, 594.

20-Hour List (Minor, dominant or related subject): Two of the following three courses: 101, 111, 112; 274, 311, 312; and five hours selected from 341, 358, 402, 430, 453, 461, 471, 482, 575.

English:

- 35-Hour List (Major): 221, 251, 361 or 362, 371 or 372 or 373, 374 or 375, 382 or 582, 490; at least two courses selected from the following: Eng. 332, 333, 335, 336, 338, 341, 342, 343, 350, 355, 356, 359, 366, 367, 380, 381, 420, 450; and upper-division courses to total 35 hours.
- 20-Hour List (Minor): 221, 275, 276, 277, and electives in English to total 20 hours.

Note 1: With the approval of the department chairman and the student's departmental adviser, a student who demonstrates unusual mastery of the principles of grammar may substitute Eng. 325, 421, 426, or 529 for Eng. 221.

Note 2. All English courses numbered in the 300, 400, and 500 levels may be counted toward the thirty-five hour total except Eng. 377 and 479, which count as teacher education courses; but only the following courses numbered below 300 may be counted: Eng. 215, 216, 218, 221, 251.

Family Life Education:

- 30-Hour List (Major): 210, 322, 360, 361, 460, 492, 566, 570, 575; Psych. 321, 450; Sociol. 403.

Recommended courses: 261, 412; Psych. 540, 357; Sociol. 560.

- 18-Hour List (Minor): 210, 322, 360, 460, 492, 566, 570.

French:

- 40-Hour List (Major): 101, 102, 201, 301, 321, 322, 326, 441, 442, 443, 444, 445, and one class selected from other French classes beyond 301 or Linguistics 325. Only students who have not had foreign residence may count 311 toward the elective.

- 30-Hour List (Minor): 101, 102, 201, 301, 321, 322, 326, 440, 445.

Note 1: It is strongly recommended that teaching majors who have not had foreign residence take French 211 and 311. It is also strongly recommended that teaching majors take Linguistics 325. All students who intend to qualify for a teaching certificate must take French 377.

Note 2: Classes up to and including French 301 may be waived for students who demonstrate proficiency in the foreign language. The department chairman will attest such proficiency in a written statement to the Teacher Certification Office.

General Business: (May be used only with a business education major.)

- 16-Hour List (Minor): 14 of the 16 credits must be in two departments.

Acctg. 201, 202, 342, 355.

Econ. 101, 111, 274, 311, 312, 461.

Bus. Mgt. 205, 347, 480, 481.

Geog. 231.

Geography:

- 30-Hour List (Major): 101, 211, 231, 351, 501, 504, 598; two courses selected from 401, 441, 522, 533; two courses selected from 455, 460, 470, 475; and electives, all to total thirty hours.

- 20-Hour List (Minor, dominant or related subject): 101, 120, 211, 231, 351, 501, plus three elective hours from upper-division geography courses.

Geology:

- 30-Hour List (Major): 111, 112, 251, 252, 311, 502; and eight hours selected from 312, 313, 410; or eight hours selected from 306, 460, 480, 510.

- 20-Hour List (Minor, dominant or related subject): 111, 112, 501, 502; and eight hours selected from 306, 460, 480, 510.

German:

- 40-Hour List (Major): 101, 102, 201, 301, 321, 322, 326, 429 or 441, 442, 443, 444, 445 or 495; and one of the following: Linguistics 325; German 429, 441, 445, 495.

30-Hour List (Minor): 101, 102, 201, 301, 321, 322, 326, 442, 445.

Note 1: It is strongly recommended that teaching majors who have not had foreign residence take German 211 or 311. It is also strongly recommended that teaching majors take Linguistics 325. All students who intend to qualify for a teaching certificate must take German 377.

Note 2: Classes up to and including German 301 may be waived for students who demonstrate proficiency in the foreign language. The department chairman will attest such proficiency in a written statement to the Teacher Certification Office.

Health:

28-Hour List (Major): Health 121, 325, 381, 521, 560, 530 or 552; Food & Nutr. 115; Zool. 261 and 262 or 263, 465; Psych. 340; and Bact. 311; and five hours selected from courses that also count in health and safety education: Health 501, 530, 552, 561; Bact. 121, 331; Chem. 101; Psych. 185, 445, 540; Speech 545; Zool. 465.

16-Hour List (Minor or dominant subject): Health 121, 381, 521, and 10 hours selected from the following: Food & Nutr. 115; Bact. 311; Psych. 340, 331; Health 325, 530, 552, and 561.

17-Hour List (Related subject): Health 121, 381, 521, 560; Psych. 340; Food & Nutr. 115; Zool. 261, 262.

16-Hour List (Driver and safety education minor): Health 121, 325, 444, 445, and six hours selected from the following courses: Health 530, 521, 560; Tchr. Ed. 406; Psych. 321, 330; Sociol. 357; and Indus. Ed. 189. Courses for the driver and safety education minor cannot be cross-referenced to the health education major and minor.

History:

30-Hour List (Major): 110, 111, 120, 121, 366; plus sufficient hours from the list below to bring the total to 30 hours.

20-Hour List (Minor, dominant, or related subject): 110, 111, 120, 121, 366; plus sufficient hours from the list below to bring the total to twenty hours:

300, 304, 307, 311, 312, 313, 323, 330, 331, 332, 333, 334, 335, 340, 343, 344, 346, 347, 351, 352, 353, 360, 364, 365, 373, 379.

Homemaking Education: (Composite teaching major)

47-48-Hour List (Major): Clo. & Text. 110, 165, 260, 235 or 300 or electives*; Food & Nutr. 255, 264, 265, 340; Hous. & Home Mgt. 250, 201 or 300 or 386, 335, 351, 370; H.D.F.R. 210, 322, 361; Homemaking Ed. 101, 375.

*Please consult a Department of Homemaking Education counselor for selection of suitable course.

Industrial Education and Drawing:

47-48-Hour List (Major): *Indus. Ed. 100, 105, 120, 125, 130, 139, 200, 250, 260, 360, 375, 405, 470, 540 or Grad. Ed. 550; Eng. Tech. 101, 102; Math. 121; Drawing 109 or Art 110, 111, 211.

*Note: If any area of instruction found in the major is selected for a minor, then the requirements in this area are dropped and a corresponding number of elective hours in industrial education are to be added in their major.

17-Hour List (Minor): Indus. Ed. 100, 105, 139, 160, 250; Eng. Tech. 101; Drawing 111.

16-Hour List (Minor in craftwork): Indus. Ed. 250, 260, 360 and eight hours selected from Indus. Ed. 160, 493; Art 263, 256, 366.

18-Hour List (Minor in drawing): Drawing 111, 211, 156, 210, 256, 311, 410.

16-Hour List (Minor in electronics): Eng. Tech. 101, 102, and 10 hours selected from Eng. Tech. 221, 228, 231, 232, 234, 235.

17-Hour List (Minor in graphic arts): Indus. Ed. 250, 351, 452, 453; Art 250.

16-Hour List (Minor in metalwork): Indus. Ed. 139, 231, 325, 335, and five hours selected from Indus. Ed. 120, 125, 130, 131.

16-Hour List (Minor in woodwork): Indus. Ed. 100, 105, 200 and eight hours selected from Indus. Ed. 119, 201, 210, 211, 301.

4. University requirements in religion, English, and health.

1. The Arts and Sciences Major (55-58 hours).

Required courses and elective courses with the major are listed below. Students graduating with a B.S. or B.A. with the foreign language preference must include a minimum of 12 hours in a foreign language.

- a. Biological Sciences (9 hours)
Bact. 121 or 321; Bot. 101 and Zool. 105.
- b. Humanities and Aesthetics (18 hours).
Art 226; three semester hours chosen from Eng. 250, 260, 270, 355, 356; Hist. 360 or 365 or 366; Tchr. Ed. 324 or 325, 340; Music 102, 237; Dram. Arts 121.
- c. Physical Education (4 hours).
Phys. Ed. 375 or 376.
Freshmen and sophomores must choose one course from each of the following four categories:
 - (1) Individual games: Phys. Ed. 104, 123, 126, 133, 134, 137, 138, 160, 161.
 - (2) Group games: Phys. Ed. 140, 144, 148, 149, 152.
 - (3) Dance: Phys. Ed. 184.
 - (4) Physical Fitness: Phys. Ed. 121, 176, 177, 178.
- d. Physical Sciences (9-12 hours).
 - (1) Required of all students (9 hours): Geol. 101, 102; Math. 305; Physics 100.
 - (2) Required of students seeking the B.A. or B.S. degree with the mathematics or science preference: an additional three hours chosen from Math. 110, 111, 112, 205, 213, 301, 302; Acctg. 132, 332; Physics 201, 202, 211, 212, 213, 214, 300; Phil. 381, 382, 594; Statistics 221, 241, 330, 331, 432, 434, 531; Chem. 111, 112, 118; Geol. 111, 112, 214, 252, 501; Psych. 374.
- e. Social Sciences (15 hours).
 - (1) Required (12 hours): Geog. 120; Hist. 120, 121; Pol. Sci. 110.
 - (2) An additional three hours must be chosen from Anthropol. 101, Sociol. 111, and Econ. 101, 111.

2. The Subject-Matter Minor.

Elementary education majors are required to have a minimum of fourteen hours in an approved area of specialization. This area may be chosen from the following list:

Art	Library science
Biological science	Physical education and health
English	Physical science
Human development and family relationships	Psychology
Geography	Recreation
History	Sociology
Industrial education	Speech
	Speech pathology and audiology

A teaching minor may also be obtained in music or foreign language. For further information, the student should consult the Teacher Certification Office, 111 David O. McKay Building.

The following listings satisfy the minor requirements:

- a. Art (15 hours): Art 121, 122, 277 or 233, 101 or 108, 256 or 263, 306.
- b. Biological Science (15 hours): Bot. 105, 276, 460; Zool. 261, 315.
- c. English (14-15 hours): Eng. 221, 275, 276 or 277, 420.
- d. Human Development and Family Relationships (15 hours): H.D.F.R. 210, 322, 361, 412, 460.
- e. Geography (14 hours): Geog. 101, 211, 231, 351, 501.
- f. History (14 hours): Hist. 110, 111, 331, 340, 352.

- g. Industrial Education (15 hours): Indus. Ed. 100, 105, 250, 260, 360, 505. Drawing 111 should replace Indus. Ed. 105 for those students intending to teach industrial education in the elementary school.
- h. Library Science (14-15 hours): Lib. Sci. 111, 355, 363, 366, 370 or 569; Speech 527.
- i. Physical Education and Health:
Men (14½ hours): Phys. Ed. 180, 201, 231, 232, 233, 235, 330, 514; Health 381, 521.
Women (15 hours): Phys. Ed. 164 or 165, 180, 201, 242, 244, 330, 514; Health 381, 521.
- j. Physical Science (15 hours): Chem. 100, 104; Physics 127, 137; Geol. 103; Math. 300 or 301.
- k. Psychology (15 hours): Psych. 111, 311, 320, 340, 445, 450 or 460.
- l. Recreation (14 hours): Rec. 123, 301, 337, 371, 387, 388, 507; Phys. Ed. 280 or 281.
- m. Sociology (14-15 hours): Sociol. 111, 112, 512; six to seven hours from Sociol. 350, 357, 383, 389, 403, 405, 470.
- n. Speech (14-15 hours): Speech 101 or 102; 305 or Dram. Arts 572; Speech 366, 491, 527, Dram. Arts 460.
- o. Speech Pathology and Audiology (14-15 hours): Speech 271, 361 or 373, 362, 483; five to six hours from Speech 270, 360, 361, 373, 374, 446, 449, 101 or 102.

3. The Major in Elementary Education (30 hours).

Tchr. Ed. 301.	Basic Concepts of Teaching	2 hours
Tchr. Ed. 310.	The State, the School, and the Teacher	2 hours
Tchr. Ed. 320.	Elementary Teaching Procedures	3 hours
Tchr. Ed. 321.	Reading in Elementary Schools	3 hours
Tchr. Ed. 322.	Arithmetic in Elementary Schools	2 hours
Tchr. Ed. 403.	Development and Learning	4 hours
Tchr. Ed. 406.	Teaching Materials Laboratory (Audio-Visual Aids)	2 hours
Tchr. Ed. 415.	Educational Values	2 hours
Tchr. Ed. 449.	Elementary Student Teaching	8 hours
Health 361.	Health Education for Elementary Teachers	2 hours

4. University requirements not covered by the majors or the electives (22-24 hours). See the general education requirements in the Student Academic Services section of the catalog.

- a. Religion (16 hours).
- b. Freshman English (4 or 6 hours).
- c. Health 130 (2 hours).

Cycles. Copies of the cycles with complete programs for all four years are available in Room 111 McKay (Teacher Certification Office). Students enter the cycles according to alphabetical order.

Students on Former Programs. Students who have been working toward certification on former programs are requested to consult with personnel of the Teacher Certification Office for counseling with respect to the completion of requirements.

Application for Certificate. To obtain the teaching certificate students should make application during their senior year. Those graduating in June should apply no later than January 15. For August graduation, students should apply no later than March 15.

Prerequisites for Student Teaching: (1) Successful completion of the Junior English Proficiency Examination; (2) B.Y.U. cumulative grade-point average of 2.25 or better, and (3) completion of Tchr. Ed. 301, 320, 321, 322, and Math. 305.

Students must make official application for acceptance to the Teacher Education Program during the semester in which they take Tchr. Ed. 301. This class must be taken as outlined on their cycle sheet.

Students desiring to obtain a kindergarten proficiency endorsement must complete the following courses: H.D.F.R. 323, 412, 422 and Tchr. Ed. 422.

Students who plan to teach in California must have, in addition to a B.A. or B.S. degree, a fifth year of college or university postgraduate education taken at the upper division or graduate level. This requirement includes a teaching major of 24 semester hours in upper division or graduate level work and a minor of 20 semester hours, 12 of which must be at the upper division or graduate level.

Certification in Speech and Hearing Therapy and H.D.F.R. The College of Education also recommends for elementary certification qualified majors in speech and hearing therapy and human development and family relationships, who use elementary education as a minor. However, the elementary education minor is not valid unless the student using it fully meets the certification requirements of the College of Education.

PREPARATION OF SECONDARY SCHOOL TEACHERS

The College of Education offers professional courses leading to secondary certification. Students desiring certification in this area must complete course requirements in the following areas:

1. **General Education.** See the general education requirements in the Student Academic Services section of this catalog.
2. **An approved teaching major and minor, or composite major.** (See below.)
3. **Professional Education.** The following required courses fill the state requirements for professional education. Sequence courses must be taken as shown below. Nonsequential courses may be taken at any time. For course prerequisites check course descriptions. Sequence courses:

Tchr. Ed. 301.	Basic Concepts of Teaching	2 hours
Tchr. Ed. 377.	Secondary Teaching Curriculum and Methods	3 hours
Tchr. Ed. 479.	Secondary Student Teaching	8 hours
Tchr. Ed. 403.	Development and Learning	4 hours

Note: Students whose major departments offer courses equivalent to Tchr. Ed. 377 and 479, bearing those numbers, should register in the appropriate department.

Nonsequential courses, to be taken during the student-teaching semester:

Tchr. Ed. 310.	The State, the School and the Teacher	2 hours
Tchr. Ed. 406.	Teaching Materials Laboratory (Audio-Visual Aids) (recommended but not required)	2 hours
Tchr. Ed. 415.	Educational Values	2 hours
Health 362.	Health Education for Secondary Teachers	2 hours

Subject-Matter Preparation of Secondary School Teachers

The University offers two approaches to certification. One consists of the traditional teaching major and teaching minor, while the other consists of a composite teaching major.

Prerequisites for Student Teaching. (1) Successful completion of the Junior English Proficiency Examination; (2) A B.Y.U. cumulative grade-point average of 2.25 or better; (3) Completion of Tchr. Ed. 301 and 377 (or departmental equivalent); and (4) Completion of at least 15 semester hours in the teaching major and 10 semester hours in the teaching minor, or 25 semester hours in the composite teaching major.

Preparation of Teachers of the Core Curriculum. One pattern of curriculum organization in the public junior high schools is the core curriculum. The most common combination in the core curriculum is history or social studies and English. To increase a teacher's employability and preparation for junior high school teaching, it is therefore recommended that a major in history be combined with a minor in English, or a major in English with a minor in history.

Teaching Major and Teaching Minor. A teaching major consists of 26 or more hours of designated courses in a subject taught in Utah high schools and approved by the College of Education. A teaching minor consists of 16 or more hours of designated courses in a subject also taught in the secondary schools of Utah and approved by the College of Education. The 26-48 hour groups listed in the following material are approved for the teaching major; the 16-34 hour groups listed in the same section are approved for the teaching minor.

These subjects are approved as either teaching majors or minors (please note exceptions):

- | | |
|---|---|
| Accounting | **Industrial education and drawing |
| Art | Journalism |
| **Biological science | *Latin |
| Botany (to be used with zoology only) | *Library science (minor only) |
| **Business education | **Mathematics |
| **Chemistry | *Metalwork (minor only) |
| *Craftwork (minor only) | **Music education (composite major only) |
| *Drawing (minor only) | **Physical education |
| *Economics | **Physics |
| *Electricity (minor only) | *Political science |
| **English | *Psychology |
| *Family life education | *Recreation (minor only) |
| **French | **Russian |
| General business (minor, usable only with business education major) | *Safety and driver education (minor only) |
| Geography | **Spanish |
| Geology | Speech |
| **German | *Sociology |
| *Graphic arts | *Woodwork (minor only) |
| Health education | Zoology (to be used with botany only) |
| **History | |
| *If elected as a major or minor, the other subject must be one marked ** above. | |

However, a minor in economics may be used with a business education major only.

Composite Teaching Major. A composite teaching major consists of work in three subjects in the same general field totaling at least 47 hours, with 16 or more hours of designated courses in a dominant subject, and 17 or more hours of designated courses in each of two related subjects in the same general area. For guidance in selecting and completing a composite teaching major, students must consult with the Teacher Certification Office, Room 111 McKay, whose responsibility it is under cooperative advisement with the academic departments to administer composite majors. Only those general fields listed below may be selected for a composite teaching major.

Any deviation from the academic programs as outlined must be approved in writing by the chairman of the subject-matter department concerned and by the Teacher Certification Office, Room 111 McKay, and filed with the student's permanent records in the College of Education.

The following general fields may be used for composite teaching majors. With only those exceptions noted, any subject in the general field may be chosen as the dominant.

Substitution of other subjects within the general field is not acceptable.

- | | |
|-----------------------------------|------------------------------------|
| Accounting and office management: | Language arts: |
| Accounting | English |
| Economics | Journalism |
| Business education | Speech |
| Agricultural education | Mathematics and physical sciences: |
| Art education | Chemistry |
| Homemaking education | Geology |

Journalism:

30-Hour List (Major): Commun. 101, 211, 212 (Journ.), 255 (Radio-T.V.), 307, 310, 321 (Journ.), 323 (Journ.), 330 (Adv. & Pub. Rel.), 490, 491; six hours selected from Commun. 331 (Adv. & Pub. Rel.), 346 (Radio-T.V.), 352 (Radio-T.V.), 365 (Photocommun.), 427 (Journ.), 435 (Adv. & Pub. Rel.), 456 (Radio-T.V.), 495, 524, 550.

20-Hour List (Minor, dominant, or related subject): Commun. 101, 211, 212 (Journ.), 321 (Journ.), 323 (Journ.), 490, 491; Five hours selected from: Commun. 255 (Radio-T.V.), 307, 310, 330 (Adv. & Pub. Rel.), 365 (Photocommun.), 524.

Latin:

40-Hour List (Major): 101, 102, 201, 301, 321, 322, 431, 432, 441, 442; and six hours selected from the following: 315, 490, 491, and Linguistics 325.

30-Hour List (Minor): 101, 102, 201, 301, 321, 322, 441, 442; and one of the following: 431, 432, or Linguistics 325.

Note 1: All students who intend to qualify for a teaching certificate must take Latin 377.

Note 2: Classes up to and including Latin 301 may be waived for students who demonstrate proficiency in the foreign language. The department chairman will attest such proficiency in a written statement to the Teacher Certification Office.

Library Science:

16-Hour List (Minor): 355, 363, 366, 370, 585 or 569 and sufficient electives to total 16 hours.

Mathematics:

35-Hour List (Major): 111, 112, 213, 301*, 302**; Statistics 241; three hours selected from 300, 371, 387, 451; nine hours selected from 300, 311, 332, 334, 336, 371, 372, 387, 451.

*A student may be exempted from 301 by receiving an "A" or "B" grade in 371.

**A student may be exempted from 302 by receiving an "A" or "B" grade in 451.

Note: If a student is exempted from either 301 or 302, additional coursework must be taken from the above optional list to make a total of 35 hours.

26-Hour List (Minor, dominant, or related subject): 111, 112, 213, 300, 301, 302, 317; Statistics 241.

Note: Students with superior high school mathematics training may be exempted from 111 by petitioning the Mathematics Department. If the exemption is granted, each of the above lists will be reduced by five credit hours.

Music Education:

67-Hour List (Composite music education major): 103, 191, 192, 193, 194, 202, 237, 291, 292, 363 or 566, 364 or 567, 367, 368, 370, 372, 374, 375, 378, 472, 481, 484, 485, 494, 495; six hours ensemble, twelve hours private instruction in the student's private specialty; pass a piano proficiency requirement equivalent to four semesters of piano before student teaching.

Note: Please refer to Department of Music requirements in this catalog for recital and ensemble requirements.

Physical Education (Men):

47-Hour List (Major): Physical Education Teaching: Core courses (30 hours): 181, 182, 201, 231, 232, 233, 234, 235, 236, 280, 330, 341, 344, 406, 413, 446, 462, 495, 543; sufficient hours to total 13-14 hours from three of the following five courses: 370, 371, 372, 373, 374, 464, 514, 570, 571; and three hours of approved electives.

Athletic Coaching Emphasis: 181, 182, 201, 231, 232, 233, 234, 235, 236, 280, 330, 341, 344, 406, 413, 446, 462, 495, 543, 370, 371, 372, 373, 374, 511, 541, and four hours of approved electives.

Approved Elective Courses for P.E. Majors (Men):

Psych. 321; Speech 102; Sociol. 383; Rec. 337, 387; Relig. 365; Phys. Ed. 250, 282, 283, 284, 285, or 574. Certain substitutes for transfer students are subject to the approval of the director of the Undergraduate Professional Program.

20-Hour List (Minor): 181, 182; four hours from 231, 232, 233, 234, 235, 236, 280; four hours from 371, 372, 373, 374. Also 330, 341, 344, 375 or 376.

Physical Education (Women):

36½-37-Hour List (Major): 180 or 280, 181, 182, 187, 188, 201, 241, 242, 244, 245, 330, 341, 344, 375 or 376, 413, 446, 462, 464, 570 or 572.

16-Hour List (Minor): 181, 182, 187, 188; three courses from 241, 242, 244, 245; 330, 341, 375 or 376.

Physical Education (Women, Dance Emphasis):

37-37½-Hour List (Major): 180, 181, 182, 183, 187, 188; two of the following courses: 241, 242, 244, 245; three courses from the following six courses: 280, 281, 282, 283, 284, 285; 287, 288, 330, 341, 344, 380, 383, 387, 388, 413, 446, 484, 485, 487, 488.

Physics:

32-Hour List (Major): 211, 212, 213, 214, 300, 315, 316; eight hours selected from 321, 322, 341, 342; six additional hours selected from any upper-division physics courses.

21-Hour List (Minor, dominant or related subject): 211, 212, 213, 214, 300, 315, 316 and three or more hours selected from upper-division courses.

Political Science:

30-Hour List (Major): 110, 300; two out of three of the following: 111, 150 or 170; and 18 hours including one course from each of the following groups: (1) 301, 303, 406, 464, 503; (2) 310, 320, 321, 322, 510; (3) 330, 331, 532, 533, 535, 536, 537, 538, 539; (4) 350, 351, 352, 355, 356, 357, 358; (5) 360, 361, 365, 563, 575; (6) 370, 371, 375, 572, 575, 580.

20-Hour List (Minor): 110, 111, 150 or 170; 11 hours including at least one class in each of four of the following groups: (1) 301, 303, 406; (2) 310, 320, 321, 322, 510; (3) 330; (4) 350, 351, 352, 355, 356, 357, 358; (5) 360, 361, 365, 575; (6) 370, 371, 375, 575.

Psychology:

30-Hour List (Preprofessional major): 111*, 321*, 360*, 365*, 370*, 374, 378*, 491, 540*; the remaining hours selected from any other psychology course (with the exception of 340) and Tchr. Ed. 304.

30-Hour List (General culture major): 111, 185, 311 (or 360 and 365), 321, 350 or 357, 450, 460, 491, 540; the remaining hours selected from any other psychology course (with the exception of 340) and Tchr. Ed. 304.

20-Hour List (Minor, dominant, or related subject): 111, 311 (or 360 and 365), 321, 450 or 540; the remaining hours selected from any other psychology course.

*Required on the undergraduate level for the school psychologist program.

Note: To complete professional education requirements, the students should complete Tchr. Ed. 304 and Psych. 321 rather than Tchr. Ed. 403.

Recreation:

20-Hour List (Minor, dominant, or related subject): 301, 337, 371, 387, 388, 505, 507; Phys. Ed. 514, 280 or 281; two hours of approved electives from the Department of Recreation list of courses.

Russian:

42-Hour List (Major): 101, 102, 201, 211, 301, 311, 321, 312, 322, 326, 441, 422, 445; one class selected from other Russian classes beyond 301 or Linguistics 325.

34-Hour List (Minor): 101, 102, 201, 211, 301, 311, 321, 312, 322, 326; one of the following: 441, 442, 445.

Note 1: It is strongly recommended that teaching majors take Linguistics 325. All students who intend to qualify for a teaching certificate may take another Lang. 377 or Tchr. Ed. 377.

Note 2: Classes up to and including Russian 301 may be waived for students who demonstrate proficiency in the foreign language. The department chairman will attest such proficiency in a written statement to the Teacher Certification Office.

Sociology:

30-Hour List (Major): 111, 112, 125, 220B, 397, 404, 405, 491, 512; sufficient hours selected from 316, 348, 350, 357, 380, 383, 389, 403, 410, 420, 423, 426, 446, 449, 470, 516, 543, 550, 552, 555, 560, 570, 580, and 591 to bring the total to 30 hours.

20-Hour List (Minor, dominant, or related subject): 111, 112, 125, 380 or 383, 405; sufficient hours selected from 316, 348, 350, 357, 383, 389, 410, 420, 423, 426, 446, 449, 470, 512, 516, 550, 552, 555, 560, 570, 580 and 591 to bring the total to 20 hours.

Spanish:

40-Hour List (Major): 101, 102, 201, 301, 321, 322, 326, 441, 451, 445; seven hours selected from other Spanish classes beyond 301 or Linguistics 325. Only students who have not had foreign residence may count 311 toward the electives.

30-Hour List (Minor): 101, 102, 201, 301, 321, 322, 326, 441 or 451, 445.

Note 1: It is strongly recommended that teaching majors who have not had foreign residence take Spanish 311. It is also strongly recommended that teaching majors take Linguistics 325. All students who intend to qualify for a teaching certificate must take Spanish 377.

Note 2: Classes up to and including Spanish 301 may be waived for students who demonstrate proficiency in the foreign language. The department chairman will attest such proficiency to the Teacher Certification Office in a written statement.

Zoology:

32-34-Hour List (Major): 105, 276 or 376, 212, 213 or 363, 230, 261, 262 or 263, 343 or 345, 346 or 347, 372, 385, 451.

Required supporting courses: Bact. 321, 322; Chem. 101, 151, 105-106, or 111-112; Geol. 101 or 111; Math. 101, 105, 106 or 111.

Recommended supporting courses: Agron. 141; Bact. 501; Bot. 335, 455, 460; Geol. 103 or 112; organic chemistry.

18-19-Hour List (Minor): 105, 230, 261, 262 or 263, 343 or 345, 346 or 347, 372, 385.

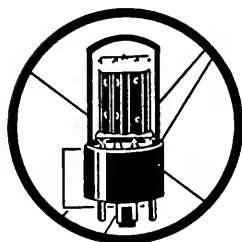
Preparation for teaching biology in secondary schools (also see botany):

Note: The preparation and certification of teachers in biology in secondary schools is a cooperative program between the departments dealing with the biological sciences and the College of Education. Prospective biology teachers must complete either a botany major and a zoology minor, or a zoology major and a botany minor.

16-Hour List (Botany minor): Bot. 101, 105, 110; 7 hours selected from 205, 321, 376, 440, 450, 460.

Recommended supporting courses: Agron. 141; Bact. 501; Bot. 335, 372, 385.

Technical Institute



Professors: Jeppsen (director, A-253 ASB), Allen, McArthur, Smith, Walker.

Associate Professors: Clark, Dean, Hinckley.

Assistant Professors: Griner, Hilton, Holt, Hubbard, Knight, Pett.

Instructors: Allen, Long, Luch, Naegle, Perry, Pratt, Spencer, Tolman, Wimmer, Wright.

Note: Instructors in the Technical Institute are drawn from a number of other departments of the University.

The Technical Institute is a major division of the General College. It is organized for the purpose of offering to students specialized programs in technical and preprofessional fields. At present these programs include the associate degree in nursing and the two-year certificate in business, commercial art, computer programming, engineering, genealogical research, general agriculture, homemaking, industrial, library, and photographic technology. Each program is developed around a basic core of college subjects including English, science, mathematics, physical education, health, and religion. It also provides the specialized training necessary to prepare potential employees for business and industry. These two-year programs are designed to develop successful and productive citizens with a constructive philosophy of life. Instructors are experienced teachers with advanced technical training and years of successful experience in their respective occupations.

Two-Year Specialized Programs

Associate degree in nursing (R.N.).

Business—for accounting, business, and office management technicians.

Commercial Art—for commercial art and advertising technicians.

Computer Programming—for business and industrial technicians.

Engineering—for chemical, civil, electrical, electronics, and mechanical engineering technicians.

Genealogical Research—for genealogical research technicians.

General Agriculture—for agricultural and farm management technicians.

Home Technology—for students preparing to make a profession of homemaking.

Industrial—for drafting, light building construction, industrial electronics, tool design, and welding technicians.

Library—for librarians and library technicians.

Photographic—for photographic and communication technicians.

Entrance Requirements

Requirements for admission to the Technical Institute of the General College are the same as those for admission to the University listed in the Student Academic Services section of this catalog. In addition to these requirements students enrolling in engineering technology will find it necessary in order to complete the required curriculum without loss of time to have successfully completed three years of high school English and two years of mathematics including algebra and geometry; also, it would be helpful to have completed one year of physical

science, preferably physics. Students having deficiencies in these requirements should consult their program advisers for remedial courses.

Graduation

Upon completion of the two-year program in nursing the associate degree will be awarded. Upon completion of a two-year curriculum in technology a certificate indicating the field of specialization will be awarded each student at the regular University graduation exercises. Requirements for this certificate include a minimum of 64 semester hours of credit with a major of 32 credits or more and the general education requirements which include the following credits: English, 6; American history, 3; health, 2; physical education, 1; and religion, 2 per semester in residence. Of the total 64 credits at least 22 must be in residence; a total of 12 credits may be taken by correspondence. A maximum of 10 "D" credits can be accepted, but a cumulative grade-point average of 2.00 or above is required.

ASSOCIATE DEGREE PROGRAM IN NURSING

Lottie Felkner, Director (L.D.S. Hospital, Salt Lake City, Utah)

Adviser: Beulah Swenson

This two-year curriculum is based upon a philosophy of education for service in the field of nursing. It consists of carefully planned and selected fundamental experiences which students need to become competent nursing practitioners. The program prepares graduates to take the State Board Test Pool Examination for licensure in Utah as registered nurses (R.N.).

First Year				Second Year			
	F	S	Su		F	S	Su
Psych. 111	3			Relig.	2	2	
Chem. 100, Lab. 104	3			Sociol. 111	3		
Eng. 111, 112	3		3	Intro. Med-Surg. Nursing			
Zool. 105	3			250	10		
Food & Nutr. 115			2	Hist. 170			3
Phys ed.	$\frac{1}{2}$	$\frac{1}{2}$		Psychiatric Nursing			
H.D.F.R. 210		3		270		3	
Bact. 121		3		Med-Surg. Nursing			
Relig. 121, 122	2	2		260		9	
Zool. 261, Lab. 262		5		Bact. 311			2
Fund. of Nursing 150 ..			8	Maternal & Child Health			
				Nursing 280			8
Total Hours	14 $\frac{1}{2}$	13 $\frac{1}{2}$	13	Total Hours	15	14	13

BUSINESS TECHNOLOGY

Supervisor: Devern Perry

Office and secretarial workers and persons with accounting training are in great demand in the employment market. Virtually every type of industry employs clerical workers since office work is such an integral part of every business. In addition to this widespread utilization of office workers there is a high turnover rate which further accentuates the need for new employees. Despite the use of more and more labor-saving equipment and increased efficiency in office procedure there will be a continued demand in the future for people with this type of training.

Accounting

Adviser: Ernest Dee Hubbard

Competent accountants with associated business experience are in great demand in both the industrial and business fields. The following two-year program will prepare students for efficient and profitable service in these areas.

First Year			Second Year		
	F	S		F	S
Math. 105	3		Acctg. 301, 312	3	3
Acctg. 232		3	Acctg. 355		3
Acctg. 201, 202	3	3	Acctg. 342	3	
Bus. Ed. 101	2		Bus. Mgt. 347		3
Bus. Ed. 206	2		Bus. Ed. 220, 320	3	3
Econ. 101 or 111		3	Bus. Ed. 305	3	
Eng. 111, 112	3	3	Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Hist. 170		3
Health 130		2	Electives	2	
Relig. 121, 122	2	2			
Total Hours	15 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	16	17

Business and Office Management

Adviser: Devern Perry

This curriculum is outlined for students who are interested in a variety of positions in office work. Students having a high degree of skill in shorthand and typewriting upon entering the Technical Institute may substitute appropriate courses with the approval of the supervisor of business technology.

First Year			Second Year		
	F	S		F	S
Bus. Ed. 101, 203	2	2	Bus. Ed. 204, 220	2	3
Bus. Ed. 111, 112	4	4	Bus. Ed. 305	3	
Bus. Ed. 206	2		Bus. Ed. 311, 312	4	4
Econ. 101 or 111		3	Bus. Ed. 370	3	
Eng. 111, 112	3	3	Bus. Ed. 485 or 486	1	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Acctg. 201		3
Health 130		2	Relig.	2	2
Relig. 121, 122	2	2	Hist. 170		3
Electives	2		Electives	1	2
Total Hours	15 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	16	17

COMMERCIAL ART AND ADVERTISING TECHNOLOGY

Supervisor: Warren F. Luch

Artistic ability combined with broad technical training and practical experience in art is necessary for becoming an effective commercial artist. Through coordinated art experiences the student develops a flexible, creative mind capable of interpreting specific problems in terms of contemporary materials. Training is given in commercial illustration, fashion drawing, production drawing, lettering, advertising design, three-dimensional design, and production of displays. The following program prepares technicians for successful entrance into the commercial art and advertising areas.

First Year			Second Year		
	F	S		F	S
Art 120, Physics 177	3	3	Art 341, 312 and Commun.		
Art 121, 122	3	3	448	3	4
Art 227 or 233, 250	2	2	Art 342, 449A	2	3
Art 239, 310	2	2	Art 449 B, C	3	3
Eng. 111, 112	3	3	Acctg. 131, Bus. Mgt.		
Health 130, Commun. 250			455	2	3
(Journ.)	2	2	Commun. 330 (Journ.),		
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Art 344	2	2
Relig. 121, 122	2	2	Hist. 170	3	
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	Relig.	2	2
			Total Hours	17	17

COMPUTER PROGRAMMING TECHNOLOGY

Supervisor: C. Edwin Dean

The use of digital computers is becoming more and more widespread in all types of business and accounting procedures, in mathematical analysis, and in control of many industrial and commercial processes. It also has capabilities ranging from simple automatic monitoring and recording to complete computer control of complex industrial operations.

Because of this widespread use of digital computers and a growing need for trained technicians in this field, students should be trained in the fundamentals of the operation of digital computers, the procedures for programming these machines, and application of these machines to all types of usage. The programming technician should be an important member of the managerial team in developing, operating, and increasing the use of automation in industry and should find himself in a very favorable position for desirable employment.

The following program is designed to prepare students for successful entrance into occupations of this type.

First Year			Second Year		
	F	S		F	S
Eng. 111, 112	3	3	Relig.	2	2
Relig. 121, 122	2	2	Eng. Tech. 352 (Com-		
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	puters II) Acctg.		
Health 130	2		557 (Computers III)		
Hist. 170		3		3	3
Math. 111, 112	3	5	Math. 213, 334	5	3
Statistics 221	3		Math. 312		3
Math. 311 (Com-			Statistics 336, 337	3	3
puters I)		3	Statistics 433		3
Electives	2		Physics 211	4	
<hr/>			<hr/>		
Total Hours	15 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	17	17

ENGINEERING TECHNOLOGY

Supervisor: G. Albert Spencer

Our present industrial and technological economy requires an operating ratio of approximately five technicians to one engineer. With the rapid advancement of science and industry, with the present shortage of engineers, and with approximately five times as many technicians needed to adequately support our engineering manpower, the need for qualified engineering technicians becomes a major concern to our country.

The engineering technology programs that follow are designed to produce qualified technicians capable of contributing to our present day industrial expansion as successful engineering aids or assistants. They should be able to take their part on the engineering team by doing the detail work of engineering, leaving the engineer free to do more of the planning and theoretical work of industrial development and operation.

CHEMICAL ENGINEERING TECHNOLOGY

Supervisor: G. Albert Spencer

The chemical engineering industry is continually expanding and developing an increasing need for technicians. These technicians work in research development, design, construction, production, supervision, services, and production sales in a wide variety of fields such as chemicals, petroleum, atomic energy, rocketry, textiles, water purification, metals, and plastics. The following program prepares technicians for successful entrance into occupations of this type:

First Year			Second Year		
	F	S		F	S
Chem. 105, 106	4	4	Chem. 221, 404	3	1
Math. 121, 122	3	3	Eng. Tech. 101, Math.		
Physics 105, 106	3	3	311	3	3
Eng. 111, 112	3	3	Indus. Ed. 335, Chem.		
Eng. Tech. 100	1		Eng. 271	4	1
Health 130		2	Fluid systems measure-		
Relig. 121, 122	2	2	ment		4
Phys. ed. $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	Indus. Ed. 218, Hist.		
			170	2	3
Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$	Drawing 111, 310	3	3
			Relig. $\frac{1}{2}$	2	2
			Total Hours	17	17

CIVIL ENGINEERING TECHNOLOGY

Adviser: G. Albert Spencer

The national highway expansion and extension program, local and national interest in building construction, perpetual need for land survey, and many other employment sources have created a demand for civil engineering technologists. They become members of the engineering team to aid the civil engineer in designing, constructing, and maintaining civil engineering projects in all areas. The following curriculum is designed to give the student basic and technical training to make him a needed and an efficient aid to the civil engineer.

First Year			Second Year		
	F	S		F	S
Eng. Tech. 100	1		Eng. Tech. 205, 206	3	3
Hist. 170		3	Eng. Tech. 211		3
Eng. Tech. 208		3	Eng. Tech. 212		2
Drawing 111	2		Eng. Tech. 213		2
Math. 121, 122	3	3	Eng. Tech. 214		2
Physics 105, 106	3	3	Eng. Tech. 216	4	
Eng. 111, 112	3	3	Civ. Eng. 211	3	
Phys. ed. $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	Drawing 257	2	
Health 130	2		Drawing 455		2
Relig. 121, 122	2	2	Math. 223	3	
			Relig. $\frac{1}{2}$	2	2
Total Hours	16 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	17	16

ELECTRICAL ENGINEERING TECHNOLOGY

Adviser: G. Albert Spencer

The steady increase in power consumption throughout the world has created a tremendous demand for electrical power technicians in the fields of power plant operation, power transmission, and distribution; manufacturing of electrical machinery; design and construction of commercial and industrial power systems; and electrical inspecting, estimating, and drafting. The following curriculum is designed to give the student the basic and technical training necessary to effectively fill positions in these fields.

First Year			Second Year		
	F	S		F	S
Eng. Tech. 100	1		Hist. 170		3
Eng. Tech. 101, 102	3	3	Eng. Tech. 221, 222	3	3
Drawing 111	2		Eng. Tech. 223, 224	3	3
Math. 121, 122	3	3	Eng. Tech. 225, 226	2	2
Physics 105, 106	3	3	Eng. Tech. 228		2
Eng. 111, 112	3	3	Eng. Tech. 241, 242	3	3
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Math. 223	3	
Health 130		2	Relig.	2	2
Relig 121, 122	2	2			
Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	16	18

ELECTRONICS ENGINEERING TECHNOLOGY

Adviser: Boyd G. Pett

The space age has placed the electronics technician in a most enviable position. Rockets, jets, atomic power; instrumentation; industrial process control, and automatic manufacturing methods; radio, television, and aviation; metallurgical processes; petroleum and chemical processes, along with others are in themselves demanding that America produce trained, qualified technicians to assist in the technological growth and development of our country. The following curriculum is designed to give the basic and technical training necessary to place the student in the role of a successful electronics engineering technician.

First Year			Second Year		
	F	S		F	S
Eng. Tech. 100	1		Hist. 170		3
Drawing 111	2		Eng. Tech. 221, 222	3	3
Eng. Tech. 101, 102	3	3	Eng. Tech. 228		2
Math. 121, 122	3	3	Eng. Tech. 231, 232	4	4
Physics 105, 106	3	3	Eng. Tech. 234		2
Eng. 111, 112	3	3	Eng. Tech. 235	4	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Eng. Tech. 237		2
Health 130		2	Math. 223	3	
Relig. 121, 122	2	2	Relig.	2	2
Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	16	18

MECHANICAL ENGINEERING TECHNOLOGY

Adviser: G. Albert Spencer

The increase in automation in all types of industry today is creating more and more need for trained mechanical technicians to work in design, production, installation, and operation of machines, tools, and all types of metal devices and products. Technicians are also needed in design, construction, and operation of machines and plants that produce power from coal, oil, gas and nuclear fuels as well as the machines that use this power. The following curriculum is designed to give the student basic technical training to qualify him for the above positions.

First Year			Second Year		
	F	S		F	S
Eng. Tech. 100	1		Hist. 170		3
Eng. Tech. 101	3		Eng. Tech. 205, 206	3	3
Indus. Ed. 130		2	Eng. Tech. 216	4	
Drawing 111	2		Eng. Tech. 241, 242	3	3
Math. 121, 122	3	3	Indus. Ed. 230		3
Physics 105, 106	3	3	Drawing 311, 410	3	3
Eng. 111, 112	3	3	Math. 223	3	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Relig.	2	2
Health 130		2			
Relig. 121, 122	2	2			
Total Hours	17 $\frac{1}{2}$	15 $\frac{1}{2}$	Total Hours	18	18

ENGINEERING TECHNOLOGY

Courses

- 100. Orientation in Technology.** (1:1:0) F.S. Jeppsen
Introduction to the fields of industrial and engineering technology.
- 101, 102. Basic Electricity.** (3:2:3 ea.) F.S. (m) Holt
Elementary theory of electricity including direct and alternating current circuits and magnetism, basic theory of electron tubes and transistors.
- 202. Contracts and Specifications.** (2:2:0) S. (m) Spencer
Preparation and interpretation of engineering and construction contracts and specifications.
- 205, 206. Engineering Materials.** (3:2:3 ea.) F.S. Prerequisite: Math. 122. Staff
A survey of the materials used in engineering structures and machines. The physical properties of these materials, with emphasis on concrete, aggregates, wood, and steel. Laboratory testing of these materials for purposes of classification and field control.
- 208. Construction Methods and Equipment.** (3:3:0) S. Prerequisites: Math. 121, Physics 105. Staff
Construction methods and machinery including inspecting, estimating, and scheduling procedures.
- 211. Structural Technology.** (3:2:3) S. Prerequisites: Math. 223, Eng. Tech. 216. Staff
Introduction to the principles of analysis and design of timber, steel, and masonry structures.
- 212. Water Resources Technology.** (2:1:3) S. Prerequisites: Math. 122, Physics 106. Staff
Introduction to basic considerations related to water resources for both domestic and irrigation use. Measurement of flow and other elementary hydraulic principles. Laboratory tests used in water and sewage treatment.
- 213. Soil Testing Technology.** (2:1:3) S. Prerequisites: Math. 122, Physics 106. Staff
Introduction to the techniques of soil testing, including identification, classification, permeability, consolidation, and shear.
- 214. Highway Technology and Materials.** (2:1:3) S. Prerequisites: Math. 122, Physics 106. Staff
Highway transportation fundamentals. Construction and maintenance of highways and streets. Laboratory work in testing procedures.
- 216. Applied Mechanics.** (4:3:3) F. Prerequisites: Math. 122, Physics 106. Staff
Introduction to statics, strength of materials, and dynamics. Elementary principles of structures, stresses in bending and torsion, and basic concepts of kinematics and kinetics. Application to engineering problems.
- 221. Electrical Machines.** (3:2:3) F. (m) Prerequisites: Math. 122, Physics 106, Eng. Tech. 102. Spencer
Fundamentals of direct and alternating current machinery including motors, generators, transformers, their control and operation.
- 222. Electrical Control Systems.** (3:2:3) S. (m) Prerequisite: Eng. Tech. 221. Spencer
A continuation of the study of electrical machines with emphasis on industrial electronic control systems.
- 223, 224. Electrical Power.** (3:2:3 ea.) F.S. (m) Prerequisites: Math. 122, Physics 106, Eng. Tech. 102. Spencer
Generation, transmission and distribution of electric power; electrical and mechanical analysis of power systems; lighting and fuse protection.

- 225, 226. Practical Wiring and Illumination.** (2:2:0 ea.) F.S. Prerequisites: Math. 122, Physics 106, Eng. Tech. 102. Spencer
Design of low voltage power systems for residential, commercial, and industrial projects. Basic principles of illumination including layout and design of lighting systems for commercial buildings, roadways, and manufacturing plants.
- 228. Electrical Drawing.** (2:1:3) S. Prerequisites: Math. 223, Physics 106, Eng. Tech. 102. Holt
Fundamentals of electrical drawing, including study of electrical symbols, making of electrical circuit drawings, control diagrams, and installation drawings.
- 231, 232. Electronics.** (4:3:3: ea.) F.S. (m) Prerequisites: Math. 122, Physics 106, Eng. Tech. 102. Pett
Advanced study of vacuum tube circuits used in commercial and industrial systems. Units include rectifiers, amplifiers, oscillators, modulators, detectors, and automatic controls.
- 234. Electrical Trouble Shooting.** (2:1:3) S. Prerequisites: Math. 122, Physics 106, Eng. Tech. 102. Pett
Maintenance and service of electronic equipment, trouble shooting techniques, and the use of electrical measuring and testing devices.
- 235. Transistors, Servos, and Magnetic Amplifiers.** (4:3:3) F. Prerequisites: Math. 122, Physics 106, Eng. Tech. 102. Pett
The action of transistors and their operation in amplifiers, oscillators, multivibrators, switching and pulse-forming circuits.
- 237. Electronic Instrumentation.** (2:2:0) S. Prerequisites: Math. 223, Physics 106, Eng. Tech. 102. Pett
The design and application of basic instrumentation to automated manufacturing and control processes.
- 241. Elementary Heat Power.** (3:2:3) F. Prerequisites: Math. 122, Physics 106. Spencer
Basic laws of thermodynamics; properties of systems; properties of gases, liquids, and vapors; pressure-volume and temperature-entropy planes; fuels and combustion, and heat transfer.
- 242. Power Plants.** (3:2:3) S. Prerequisites: Math. 122, Physics 106. Spencer
Classification, performance, capacity, and details of boilers and their auxiliaries and accessories; applications of steam power; work, energy, and efficiencies of engines and turbines; and hydroelectric power.
- 252. Computer Applications.** (2:2:0) Prerequisite: Math. 121. Staff
Programming and application of computers to automation, graphics, production scheduling, critical path scheduling, and numerically controlled machines.
- 352. Advanced Digital Computers.** (3:2:2) Prerequisite: Math. 311 Dean
Advanced coding techniques, advanced computer logic, principles of board wiring using a modern digital computer and auxiliary equipment as laboratory tools.

GENEALOGICAL RESEARCH TECHNOLOGY

Supervisor: E. C. Jeppsen

With the increasing emphasis on genealogy, many technicians and specialists are needed to do genealogical research. Because of the shortage of professional help in this field, there is a long waiting list of work to be done. The standards of completeness and accuracy required in genealogical research can best be met through adequate and careful training. This points out the need for competently trained leaders and instructors in genealogical research for the various wards and stakes of the Church.

Competent research workers and teachers in genealogy are in great demand in developing individual genealogies, and genealogical research technicians are needed by family organizations and various institutions. Also, genealogical research is being done in the libraries of most states and larger cities as well as in national libraries, creating potential employment for trained genealogists. The need is increasing rapidly; qualified genealogical research technicians will continue to be in ever greater demand.

The following two-year program is designed to prepare genealogical research technicians qualified to meet this need. In addition, students majoring in other fields might choose genealogy as their minor, if approved by their major department.

Genealogical Research Two-Year Program

First Year			Second Year		
	F	S		F	S
Relig. 203 or 361 & 362	2		Genealogy 221, 295	3	4
Genealogy 210, 211	3	3	Geog. 351, 460	3	3
Genealogy 220		3	Lib. Sci. 355, 370	3	3
Eng. 111, 112	3	3	Tchr. Ed. or lang.	3	3
Hist. 170, 335 or 360	3	3	Electives	3	3
Bus. Ed. 101 (typing)		2	Relig.	2	2
Health 130	2				
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Total Hours	17	18
Relig. 121, 122	2	2			
Total Hours	15 $\frac{1}{2}$	16 $\frac{1}{2}$			

Courses

210. **American Genealogical Research I.** (3:3:0) S. (m) Prerequisite: Relig. 203 or 361 and 362 (may be taken concurrently). Pratt & Wright
Sources available for genealogical research in America; what sources exist, where they are available, what genealogical information they contain, and how they can be related to scientific methods of obtaining and proving ancestral connections.
211. **American Genealogical Research II.** (3:3:0) S. (m) Prerequisite: Genealogy 210. Wright
A further study of record sources and consideration of regional peculiarities. A number of case files are studied and assignment exercises are based on individual pedigrees.
220. **Genealogical Research in England and Wales I.** (3:3:0) F. (m) Prerequisite: Relig. 203 or 361 and 362 (may be taken concurrently). Pratt
Economic and social background, traditions, early L.D.S. Church records, civil registration, census returns, parish administration, parish registers, reading early English handwriting, bishop's transcripts, marriage licenses, nonconformist records, and exercises on the practical application of the sources discussed.
221. **Genealogical Research in England and Wales II.** (3:3:0) S. (m) Prerequisite: Genealogy 220. Pratt
Probate records, military records, apprentice records, freeman's records, lay subsidies, inquisitions post mortem, feet of fines, manor court roll, directories, chancery proceedings, records of early schools and universities, quarter sessions records, visitations, poll books, and exercises on the practical application of the sources discussed.
230. **Danish Ancestral Research I.** (3:3:0) F. (m) Prerequisite: Relig. 203 or 361 and 362 (may be taken concurrently). Staff
Genealogical records and their use in determining the Danish ancestral home of the immigrant to the United States. Records of Danish origin and of genealogical value are studied, including parish registers and census records.

231. Danish Ancestral Research II. (3:3:0) S. (m) Prerequisite: Genealogy 230.

Staff

An introduction to Danish probate records, land records, tax lists, civil marriages, vaccination lists, military records, and ecclesiastical sources. Also included are military and naval levying rolls.

—295. Applied Research Seminar. (4-8:0:20-40) S.Su. Prerequisites: Genealogy 211, 221, or 231.

Staff

Basic practice in research procedure in the L.D.S. Genealogical Library under direct supervision of competent and experienced staff. Students will use all library facilities in completing research assignments.

Note: For additional genealogical courses, see Religion 203, 361, and 362.

GENERAL AGRICULTURAL TECHNOLOGY

Supervisor: Rudger H. Walker

Training in practical phases of agriculture is offered for those students desiring to complete only two years of college or who are unable to continue with the four-year professional course leading to a bachelor's degree.

The suggested course of study outlined below is designed to give the student an understanding of the primary phases of practical agriculture along with some basic science courses required for upper division work in agriculture. In these courses emphasis is given to the general principles of crop and livestock production, the economics of agriculture, and the principles of farm management.

Should the student later decide to continue with the four-year curriculum, all of the courses listed in the suggested study program may be counted toward the bachelor's degree.

First Year			Second Year		
	F	S		F	S
An. Sci. 120, 208 or 161	3		Agron. 151, 282	4	3
An. Sci. 153		3	Ag. Econ. 325, 112	3	4
Hort. 101		3	An. Sci. 207		3
Bot. 101	3		Chem. 101, 102	5	5
Zool. 105		3	Relig.	2	2
Eng. 111, 112	3	3	Hist. 170	3	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$			
Health 130	2		Total Hours	17	17
Electives	2	2			
Relig. 121, 122	2	2			
Total Hours	15 $\frac{1}{2}$	16 $\frac{1}{2}$			

HOME TECHNOLOGY

Supervisor: Verda Griner

The challenge of being competent in managing the home becomes significant when one realizes that approximately a quarter of a million dollars is spent for goods and services during forty-five years of marriage if the average income is one hundred dollars per week.

This two-year program is planned for those who wish to make a profession of homemaking and at the same time develop abilities that may be put to use in middle-level occupations.

The curriculum provides a balance of general education and courses from all areas of the College of Family Living. A two-year certificate is awarded on successful completion of the courses listed below. Some substitutions to suit special interests may be made by consulting the adviser.

First Year			Second Year		
	F	S		F	S
Relig. 121, 122	2	2	Relig.	2	2
Hous. & Home Mgt. 170	2		Hous. & Home Mgt. 250, 335	2	3
Clo. & Text. 110, 165	2	4	Hous. & Home Mgt. 220, 380	2	3
Food & Nutr. 110	2		Food & Nutr. 115, 245	2	2
Psych. 111	3		H.D.F.R. 360, 361	3	3
H.D.F.R. 210		3	Hist. 170		3
Eng. 111, 112	3	3	Nursing 288		1
Health 130		2	Clo. & Text. 260	3	
Phys. ed. $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	Art 101	2	
Econ. 101	3		Music 103	2	
Zool. 105		3			
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	18	17

INDUSTRIAL TECHNOLOGY

Supervisor: Ross J. McArthur

Our present industrial and technological economy requires industrial technicians as well as engineering technicians. The industrial technician serves the industrial occupations in a manner similar to the way the engineering technician serves the engineering occupations.

The industrial technician assists with technical details in an industrial occupation. He uses tools, instruments, and/or special devices to design, illustrate, fabricate, maintain, operate, and test objects, materials, or equipment; examines and evaluates plans, designs, and data; and interprets work procedures and maintains harmonious relationships among groups of workers.

To meet the need for trained industrial technicians for industry, the following curricula are provided.

Drafting Technology

Adviser: Wilford J. Tolman

This program is offered to prepare students for positions as architectural or mechanical drafting technicians. Drafting technicians are generally in great demand in all areas of scientific research and engineering development. Job opportunities are available in industry and in architects' offices throughout the country.

First Year			Second Year		
	F	S		F	S
Drawing 111, 211	3	2	Drawing 210, 256	2	3
Math. 121, 122	3	3	Drawing 156, 257	2	2
Eng. Tech. 100, 101	1	3	Indus. Ed. 130, 131	2	2
Eng. 111, 112	3	3	Indus. Ed. 125	2	
Health 130	2		Eng. Tech. 102, 228	3	2
Hist. 170		3	Physics 105, 106	3	3
Relig. 121, 122	2	2	Relig.	2	2
Phys. ed. $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	Electives		3
Total Hours	14 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	16	17

Light Building Construction Technology

Adviser: Edwin C. Hinckley

This curriculum offers instruction toward a two-year technical certificate in light building construction. It is designed to give the student the maximum amount of technical information and training to prepare him to become a successful building construction technician.

Graduates should find employment in the building construction occupations with increased opportunities for advancement in responsible positions in industry.

First Year			Second Year		
	F	S		F	S
Indus. Ed. 105, 125	2	2	Indus. Ed. 341		2
Indus. Ed. 100, 200	3	3	Indus. Ed. 210, 211	3	2
Indus. Ed. 139, 218	2	2	Indus. Ed. 217		2
Indus. Ed. 196, 197	2	2	Indus. Ed. 411		3
Hist. 170	3		Civ. Eng. 211, Indus Ed.		
Eng. 111, 112	3	3	201	3	3
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Indus. Ed. 410, Drawing		
Health 130		2	156	3	2
Relig. 121, 122	2	2	Physics 105, Indus Ed.		
Eng. Tech. 100		1	405	3	2
			Econ. 461	3	
			Relig.	2	2
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$			
			Total Hours	17	18

Industrial Electronics

Adviser: Ivan L. Holt

This curriculum provides a basic preparation for employment in a variety of occupations in the general field of electronics. Graduates of this program should have a good foundation in the principles of electronics, and should have considerable ability in operating, servicing, and directing the use of electronic equipment.

First Year			Second Year		
	F	S		F	S
Eng. Tech. 101, 102	3	3	Eng. Tech. 231, 232	4	4
Indus. Ed. 196, 197	2	2	Eng. Tech. 235, 234	4	2
Eng. Tech. 100	1		Eng. Tech. 228, Indus. Ed.		
Drawing 111, 211	3	2	139	2	2
Physics 105, 106	3	3	Econ. 461		3
Eng. 111, 112	3	3	Hist. 170	3	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Electives	2	3
Health 130		2	Relig.	2	2
Relig. 121, 122	2	2			
Total Hours	17 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	17	16

Tool Design Technology

Adviser: Dell K. Allen

This curriculum offers comprehensive training for a career as a technician in tool design and construction. It is planned to give the student theoretical as well as practical education in design and use of jigs, fixtures, cutting tools, and other manufacturing equipment.

Graduates should readily find employment as junior tool designers, engineering assistants, laboratory technicians, mechanical draftsmen, inspectors, estimators, or mechanical equipment salesmen.

First Year			Second Year		
	F	S		F	S
Indus. Ed. 130, 131	2	3	Drawing 449, Eng. Tech.		
Indus. Ed. 325	2		101	3	3
Indus. Ed. 196, 197	2	2	Indus. Ed. 231, 230	3	3
Drawing 111, 211	3	2	Indus. Ed. 335, 333	4	3
Eng. 111, 112	3	3	Drawing 210	2	
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Physics 105, 106	3	3
Health 130	2		Relig.	2	2
Eng. Tech. 100		1	Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$
Relig. 121, 122	2	2	Eng. Tech. 252		2
Hist. 170		3			
Total Hours	16 $\frac{1}{2}$	16 $\frac{1}{2}$	Total Hours	17 $\frac{1}{2}$	16 $\frac{1}{2}$

Welding Technology

Adviser: Lester Long

This curriculum offers comprehensive training for the preparation of welding technicians for industry. This is a rapidly expanding field and graduates should readily find employment with excellent opportunities for advancement as welding technicians, laboratory technicians, inspectors, equipment and service salesmen.

First Year			Second Year		
	F	S		F	S
Indus. Ed. 120, 125	2	2	Indus. Ed. 221, 226	5	5
Indus. Ed. 325, 126	2	3	Eng. Tech. 101	3	
Indus. Ed. 231		3	Indus. Ed. 335, 227	4	3
Indus. Ed. 196, 197	2	2	Physics 105, 106	3	3
Drawing 111, 211	3	2	Hist. 170		3
Eng. 111, 112	3	3	Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$			
Health 130	2		Total Hours	17	16
Relig. 121, 122	2	2			
Eng. Tech. 100		1			
Total Hours	16 $\frac{1}{2}$	18 $\frac{1}{2}$			

LIBRARY TECHNICIAN

Supervisor: Hattie M. Knight

Many positions in modern-day libraries can best be filled by library technicians. Library technicians should be able to do filing, cataloging, work with bibliographies, and simple reference work. Students completing the library technician program should be prepared to work in public, college, and university libraries and specialized research and information centers. The shortage of librarians is critical and likely to remain so for some time. To meet the need for library technicians, the following curriculum is provided:

First Year			Second Year		
	F	S		F	S
Lib. Sci. 111, 355	1	3	Lib. Sci. 370, 585	3	2
Lib. Sci. 363	3		Lib. Sci. 366		3
Eng. 111, 112	3	3	Bus. Ed. 204, 206	2	2
Bus. Ed. 101, 203	2	2	Bus. Ed. 220		3
Health 130		2	Relig.	2	2
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	Hist. 170	3	
Electives	4	2	Tchr. Ed. 406	2	
Humanities 101		3	Electives	3	5
Relig. 121, 122	2	2			
Total Hours	15 $\frac{1}{2}$	17 $\frac{1}{2}$	Total Hours	15	17

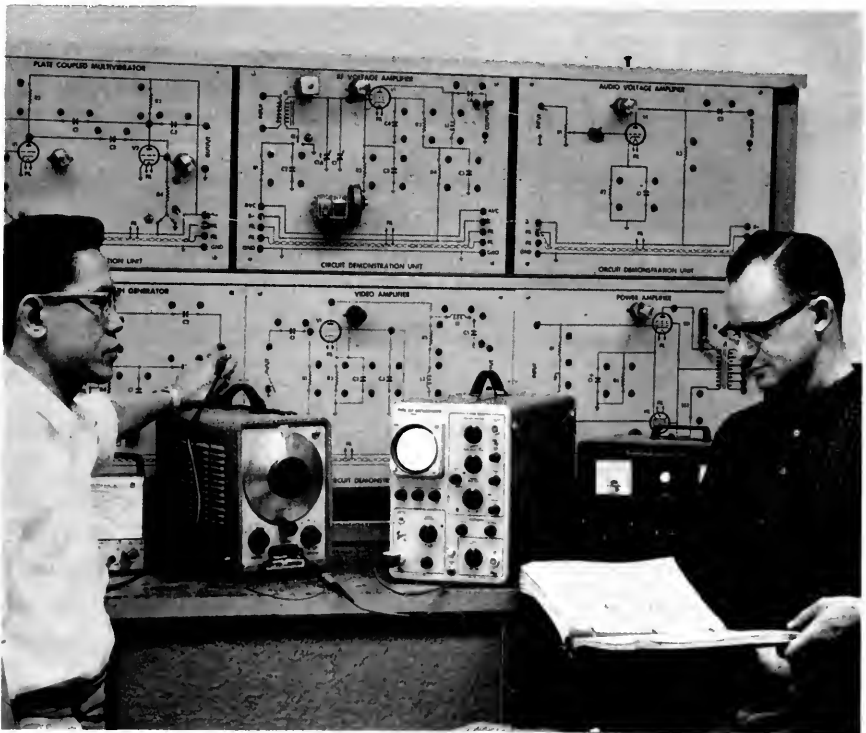
PHOTOGRAPHIC TECHNOLOGY

Supervisor: Oliver R. Smith

The two-year program in photographic technology is designed to prepare technicians for service on the staffs of newspapers, magazines, industrial departments, and commercial and portrait studios. Training is provided in both

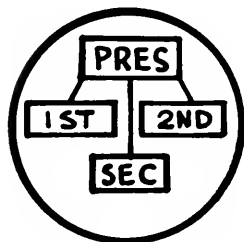
camera and darkroom techniques for still photography, along with supporting courses in communications, cinematography, advertising, design, and graphic arts.

First Year			Second Year		
	F	S		F	S
Commun. 101	2		Commun. 330 (Adv.) ..	2	
Art 120	2		Commun. 211, 307	2	2
Physics 177	3		Commun. 367, 368		
Eng. 111, 112	3	3	(Photocommun.)	2	2
Hist. 170		3	Commun. 369 (Photo-		
Phys. ed.	$\frac{1}{2}$	$\frac{1}{2}$	commun.)		2
Health 130	2		Commun. 371, 372		
Relig. 121, 122	2	2	(Photocommun.)	2	2
Indus. Ed. 250, 453	2	5	Relig.	2	2
Commun. 365 (Photo-			Electives	6	6
commun.)		2			
Total Hours	16 $\frac{1}{2}$	15 $\frac{1}{2}$	Total Hours	16	16



Student studying a problem in electronics

Undergraduate Studies in Religious Instruction



Associate

Professors: Doxey (chairman, 120 S), Bankhead, Pearson.

Assistant

Professors: W. K. Andersen, Bentley, L. C. Berrett, Palmer, Patch, Rasmussen, Ricks.

Instructors: Cook, Meservy, Nielsen, Stevenson.

Courses in the Department of Undergraduate Studies in Religious Instruction are offered to help students meet the religion requirements of the University. An undergraduate major or minor is not offered in this department.

Courses

- 121, 122. Introduction to the Book of Mormon and Its Teachings.** (2:2:0 ea.) F.S.Su. Home Study also. (G-R) **Staff**
Consideration of origin, content, and teachings of the Book of Mormon.
- 211. Introduction to the New Testament: Jesus and the Apostles.** (2:2:0) F.S.Su. Home Study also. (G-R) **Staff**
The Gospels and part of the book of Acts.
- 212. Introduction to the New Testament: Paul and the Early Church.** (2:2:0) F.S.Su. Home Study also. (G-R) **Staff**
Paul and his letters and the literature of the early church.
- 230, 231. The Gospel in Principle and Practice.** (2:2:0 ea.) F.S.Su. Home Study also. (G-R) **Staff**
A consideration of the basic principles of the gospel of Jesus Christ in the light of the practical needs and problems of today's youth.
- 232, 233. Missionary Approach to the Gospel.** (2:2:0 ea.) F.S.Su. Home Study also. (G-R) **Bankhead, Ludlow, Pearson, Ricks**
Recommended for students contemplating an L.D.S. mission. Concerned with procedures used in explaining the restored gospel of Jesus Christ to friends and investigators.
- 234, 235. Missionary Approach to the Gospel in French.** (2:2:0 ea.) F.S. (G-R) **Staff**
Prerequisite: one year of French or equivalent.
Consideration of the doctrines, scriptures, and techniques of effective missionary work for the L.D.S. Church.
- 236, 237. Missionary Approach to the Gospel in German.** (2:2:0 ea.) F.S. (G-R) **Staff**
Prerequisite: one year of German or equivalent.
Consideration of the doctrines, scriptures, and techniques of effective missionary work for the L.D.S. Church.
- 238, 239. Missionary Approach to the Gospel in Spanish.** (2:2:0 ea.) F.S. (G-R) **Staff**
Prerequisite: one year of Spanish or equivalent.
Consideration of the doctrines, scriptures, and techniques of effective missionary work for the L.D.S. Church.
- 240. Church History.** (1-2:Arr.:Arr.) Su. **Staff**
Limited to participants in the B.Y.U. Travel-Study Program. The growth of the Church from the New York period to the westward migration.

- 241, 242. Latter-day Saint History.** (2:2:0 ea.) F.S.Su. (G-R) Staff
A chronological study of Church history and doctrine—241: through the life of Joseph Smith (1844); 242: from 1844 to the present.
- 261. Introduction to Genealogy.** (2:2:0) F.S.Su. Home Study also. (G-R) Bennett, Stevenson
An elementary course in basic genealogical concepts, doctrinal background, essential record sources, modern methods of research, the pedigree chart, the family group sheet, numerous other genealogical forms and their uses, writing biographies and autobiographies, an introduction to the use of the Genealogical Association library, and one's book of remembrance.
- 262. General Research Procedures.** (2:2:0) F.S. (m) Home Study also. (G-R) Bennett, Pratt, Stevenson, Wright
A basic course in genealogical record keeping and research, its purpose, standards methods and sources, analysis of personal and typical pedigree problems, and the evaluation of record evidences. (Additional courses in genealogy will be found in the Technical Institute.)
- 301, 302. Introduction to the Old Testament and Its Teachings.** (2:2:0 ea.) F.S.Su. Home Study also. (G-R) Clark, Done, Meservy, Rasmussen
Course 301 is a brief introduction to the structure of the Old Testament and study of its great teachings, Genesis to I Kings 11. Course 302 considers I Kings 12 to Malachi.
- 324, 325. The Doctrine and Covenants.** (2:2:0 ea.) F.S.Su. Home Study also. (G-R) Andrus, Cowan, Doxey, Nielsen
Origin and contents of the Doctrine and Covenants. Course 324 gives a brief discussion of the history of the Doctrine and Covenants considering study of Sections 1 to 70. Course 325 considers Sections 71 through 136.
- 327. Introduction to the Pearl of Great Price.** (2:2:0) F.S.Su. Home Study also. (G-R) W. K. Andersen, Andrus, Clark
Origin and content of the Pearl of Great Price.
- 331, 332. Analysis of L.D.S. Teachings.** (2:2:0 ea.) F.S.Su. Home Study also. (G-R) Cowan, Done, Doxey, Turner
Distinctive doctrines and principles of the restored gospel of Jesus Christ.
- 362. Genealogy.** (2:2:0) F.S.Su. Home Study also. (G-R) Bennett, Stevenson
A survey course in methods of research, time-saving indexes, filing systems, wise use of various records, extending the personal pedigree, and census genealogical problems.
- 365. Applying Gospel Principles in Scouting.** (2:2:0) F.S. (G-R) Packer
Deals with the role of scouting in the L.D.S. Church and how gospel principles may be applied in that program.
- 371. Teaching the Scriptures.** (2:2:0) F.S. Prerequisite: consent of instructor. L. Anderson
Designed for prospective seminary teachers.
- 401. Israel's Prophets.** (2:2:0) F.S.Su. (G-R) Recommended: Relig. 301 and 302. Done, Rasmussen
The messages of the great "writing prophets" and their value in their time and ours.
- 411. Life and Teachings of Jesus.** (2:2:0) F.S.Su. (G-R) R. L. Anderson, Bentley, Patch, Turner
The teachings of Jesus Christ and the major events of His life.
- 412. Paul and the Apostolic Church.** (2:2:0) F.S.Su. (G-R) R. L. Anderson, Bentley, Patch, Turner
The books of the New Testament except the four gospels with emphasis upon Paul's letters.

- 421, 422. History and Teachings of the Book of Mormon.** (2:2:0 ea.) F.S.Su. (G-R)
Bankhead, Barron, Ludlow, Nielsen, Ricks, Turner, Pearson
Selected problems and teachings of Nephite sacred scripture.
- 435. Mormonism and Modern Scientific Thought.** (2:2:0) F.S.Su. (G-R) Nielsen
A consideration of significant theological-philosophical concepts in Mormonism as they relate to certain challenging areas of modern scientific assumption involving God, man, and the universe. (Offered in 1965 and 1966.)
- 438. Your Religious Problems.** (2:2:0) F.S.Su. (G-R) Belnap
Consideration of problems pertaining to the individual student.
- 441, 442. History and Doctrine of the Church.** (3:3:0 ea.) F.S.Su. Home Study Staff
also. (G-R)
An intensive, interpretive examination of the history of the Church—
441: to the Utah period. Readings include Vol. I, II, III of Robert's Comprehensive History of the Church; 442: from the beginning of the Utah period to the present. Readings include Vol. IV, V, VI of Roberts' history.
- 451. Christian History through the 15th Century.** (2:2:0) F.S.Su. (G-R) Horsley
- 452. Christian History after the 15th Century.** (2:2:0) F.S.Su. (G-R) Horsley
- 453. World Religions.** (2:2:0) F.S.Su. (G-R) Palmer
- 454. Historical Setting of Mormonism.** (2:2:0) F.S.Su. (G-R) Backman
- 460. Priesthood, Church Government, and Welfare.** (2:2:0) F.S.Su. (G-R)
W. K. Andersen, Doxey
Powers, authority, and functions of the priesthood and its role in Church government are considered in addition to the major historical, economic, and spiritual aspects of the L.D.S. Welfare Program.



A careful checking of facts in church history

Youth Leadership

Associate Professor: Packer (chairman, 215 SFH).



The Department of Youth Leadership provides a four-year program leading to a Bachelor of Science degree in youth leadership. It offers a definite curriculum designed to prepare men for careers as professional Boy Scout administrators and a broader program of general education, cultural, and specialization courses calculated to help meet requirements for leadership in other youth agencies, public and private.

A second major objective of the department is to provide college men and women with knowledge, and experience in a variety of youth leadership areas to the end that they may better serve their church and community by rendering skilled volunteer leadership to youth.

Degree in Youth Leadership (Scout Executive Emphasis)

For a Bachelor of Science degree in youth leadership a student may complete the following courses:

- Youth Ldrshp. 172, 173, 174, 301, 302, 305, 306, 332, 342, 375, 410, 412, 491, 492 30 hours
- Equivalent volunteer experience in the subject matter of these courses will allow the student to select, in consultation with the adviser, alternate courses in business management, public relations, journalism, speech, human relationships, sociology, and recreation.

Requirements for Youth Leadership Minor (Scout Executive Emphasis)

For a minor in youth leadership, 14 hours should be selected from the following courses:

- Youth Ldrshp. 172, 173, 174, 332, 305, 306, 342, 412, 490, 491.

Suggested Program for Youth Leadership Majors

Freshman Year		Sophomore Year	
	Hours		Hours
Dev. and forum assys.	2	Dev. and forum assys.	2
Eng. 111, 112	6	Hist. 170	3
Health 130	2	Phys. ed.	1
Phys. ed.	1	Rec. 337	2
Youth Ldrshp. 172, 173	4	Speech 121	3
Speech 101, 102	5	Bus. Ed. 220	3
Commun. 101	2	Youth Ldrshp. 174, 342	4
Gen. ed. requirements	12	Gen. ed. requirements	16
Total Hours	34	Total Hours	34

Junior Year		Senior Year	
	Hours		Hours
Dev. and forum assys.	2	Dev. and forum assys.	2
Speech 305	2	Commun. 435	3
Bus. Mgt. 480	1	Bus. Mgt. 420, 481, 569	7
Psych. 357, Sociol. 316	4	Youth Ldrship. 306, 375, 410	
Youth Ldrship. 301, 302		412,	11
(summer)	5	Gen. ed. requirements and	
Youth Ldrship. 305, 332, 491,		electives	11
492	8		
Gen. ed requirements and		Total Hours	34
electives	12		
Total Hours	34		

Courses for Nonscouting Youth Agency Majors

Students preparing for a career in youth agencies other than scouting may complete 30 hours of credit selected from the following courses plus 6 hours from the professional physical education series 231 through 236 for men; for women, 6 hours from physical education 241 through 245:

- Bus. Mgt. 480, 481. Executive Lectures. (1:1:0).
- Bus. Mgt. 521. Human Relations in Adm. II. (3:3:0)
- Bus. Mgt. 569. Personnel Management. (3:3:0) (m).
- Bus. Mgt. 420. Human Relations in Adm. I. (3:3:0) (m).
- Bus. Ed. 220. Business Communications. (3:3:0).
- Bus. Ed. 305. Principles and Method of Office Management. (3:3:0) (m).
- Speech 101. Fundamentals of Speech. (3:3:1).
- Speech 102. Introduction to Public Speaking. (3:3:1)
- Speech 305. Discussion and Conference Leadership. (2:3:0)
- Speech 527. Story Telling. (2:2:0)
- Sociol. 316. Social Control. (2:2:0).
- Sociol. 357. Group Relations and Leadership. (3:3:0) (m).
- Sociol. 383. Juvenile Delinquency. (2:2:0)
- Sociol. 449. Community Organization - Action - Planning. (2:2:0) (m).
- Rec. 337. Philosophy of Recreation. (2:2:0).
- Rec. 371. Planning for Family and Neighborhood Recreation. (2:2:0) (m).
- Rec. 387. Planning for Social Recreation. (2:2:0) (m).
- Rec. 502. Camping Education. (2:2:0).
- Rec. 505. Administration of Recreation. (3:3:0).
- Commun. 211. Basic Reporting. (2:1:3) (m).
- Commun. 255. Radio and Television. (2:2:2) (m).
- Commun. 330. Introduction to Advertising. (2:2:0).
- Commun. 435. Public Relations. (3:3:0) (m).
- Psych. 336. Personnel Psychology. (4:2:6) (m).
- Psych. 460. Principles of Learning. (3:3:0).
- Indus. Ed. 160 or 260. Handicrafts or Crafts. (3:1:5) (m).

Courses

- 172. Cub Scout Leadership. (2:2:0) S. (m) Staff
 Designed to teach the organization, administration, and purpose of Cub Scouting as a basic experience of the American home. Lecture, demonstration, and laboratory participation.

- 173. Boy Scout Leadership.** (2:2:0) F. (m) Staff
Acquisition of techniques and skills designed to produce youth leadership and fellowship. Lecture, demonstration, and laboratory participation.
- 174. Explorer Leadership.** (2:2:0) S. (m) Staff
An examination of programming for the teenager. Lecture, demonstration, and laboratory participation.
- 301. National Camp School.** (1:lecture and lab in an organized camp situation for one full week) F. Staff
Theory and application of principles of camp administration, camp aquatics, and camp program. Taught by National Council (Boy Scouts of America) at a selected local council camp. Recommended for youth leadership majors only.
- 302. Summer Camp Administration.** (2-4:0:4-8 weeks) F. Staff
Provides an actual administrative experience as a staff member of a local council summer camp. The course may be extended to additional summer employment for some students. Selection of campus arranged for by the department. Required of youth leadership majors only.
- 305, 306. Council Operating Committee Functions and Scouting Finance** (3:3:0 ea.) F.S. (m) Packer
Objectives and programs of local councils; the function and purpose of operating committees within the council and how they combine the national and local program features to serve institution, leader, and boy. Local council finance is emphasized.
- 332. Scouting Sponsors and Community Relationships.** (3:3:0) F. (m) Packer
Examines the institutional acceptance of scouting as a major youth program in America and defines the relationships of the major religious and civic sponsors of scouting to the Boy Scouts of America.
- 342. American Youth Organization Development.** (2:2:0) S. (m) Packer
A comparative analysis of the major youth organizations of America; their aims, objectives, and contributions to the American society.
- ☐ **Religion 365. Applying Gospel Principles to Scouting.** (2:2:0)
- 375. Executive Work Scheduling and Program Planning.** (2:2:0) S. Packer
Methods and practices of executive work scheduling for youth agency administrators. Public and group leadership demands are examined, and personal programs are developed to meet these demands.
- 378. Outdoor Skills for Women.** (2:2:0) S. Packer
Designed primarily for women interested in skills and techniques that have application to service leadership. Particular attention is given to outdoor and activity experiences in cubbing, guide scouting, girl scouts, and campfire girls.
- 410. National and Local Council History and Development.** (2:2:0) S. Packer
Traces the evolution of the program of scouting in America and defines the organization, functions, and services of the national council to the local council.
- 412. Professional Preview Experience.** (3:0:10) F. (m)
Designed to develop readiness for full comprehension and administration of the operation of a district committee. A laboratory fee of \$35 is charged payable upon application by the preview student. Students are expected to refrain from registering for evening classes during the semester. Opportunities for training will be correlated with actual participation with district scout executives as they fulfill assignments in local councils of the area.
- 491. Conference Planning Techniques.** (1:1:0) S. (m) Packer
Theory and practice of planning conferences and various techniques of pre-conference involvement.
- 492. Seminar in Research Problems and Program Trends.** (1:1:0) F. Packer

Zoology and Entomology



Professors: Beck (chairman, 280 B), Allen, Hayward, V. Tanner, W. Tanner.

Associate Professors: Allred, Chapman, Frost, Murphy, Wood.

Assistant Professors: Jaussi, Simmons.

Zoology is the basic animal science. The courses offered in this department are designed to

1. Provide courses suitable to the general education requirements in the biological sciences including science courses needed for the B.A. or B.S. degree.
2. Contribute toward the training of prospective teachers in the biological sciences.
3. Provide basic and advanced training for persons wishing to major and obtain a bachelor's, master's, or doctor's degree in zoology and entomology.
4. Offer service courses for the benefit of students majoring in other departments who need supporting work in the zoological sciences.
5. Furnish courses required in preprofessional work toward medicine, dentistry, and other medical sciences.

Requirements for a Major

It is desirable that a student select a major at the earliest possible date in his college program. A candidate for a bachelor's degree who elects to major in the Department of Zoology and Entomology will be assigned an adviser who will assist him in the organization of his entire program. The course of study must include (1) the General Education requirements of the University, (2) the general departmental requirements, and (3) one of the optional sequences in zoology relating to the student's special interests. Any exceptions to the departmental and optional sequences must be approved by the chairman of the department.

General Departmental Requirements

All majors in zoology must complete Zool. 105, 276 or 376, 212, 213 or 363, 385, 496, and 497.

Optional Sequences

Natural History. This option is intended for students interested in the natural history, ecology, and geographical distribution of animals. Such training is preparatory for careers in game management, museum services, biological surveys, and freshwater or marine biology as they apply to the National Park Service, Fish and Wildlife Service, and other agencies. Courses required for this sequence are 213, 230, 372, 451, 465, and an additional six hours selected from 332, 343, 345, 346, 347, 363, 417, and 421 with the approval of the departmental adviser. Supporting courses in botany, the physical sciences, and mathematics should be included.

Anatomy and Experimental Zoology. This option is designed for students who plan advanced training in such fields as comparative anatomy, histology, phys-

iology, genetics, radiation biology, embryology, medicine, and dentistry. This training may lead toward university teaching, research, and medical sciences. The following courses are required: 363, 370, 373, 465, and at least 3 hours selected from 230, 371, 417, 561, 562, 564, 565, 573, and 578 with the approval of the departmental adviser. Supporting courses in bacteriology, botany, chemistry, physics, and mathematics should also be taken.

Basic Medical Sciences. This option is designed for students who desire to complete only three years of college before entering a professional school yet contemplate getting a baccalaureate degree from B.Y.U. by transfer of credit from a professional school. In addition to the general departmental requirements (senior seminars may be omitted) satisfactory completion of the first year of an accredited dental or medical school is required. Supporting courses should include mathematics, physics, and a minor in chemistry which will fulfill the entrance requirements for the professional school. A minimum of 93 semester hours must be earned before entering the professional school and 20 hours of the credit earned at B.Y.U. must be upper division. A student pursuing this option who is not admitted to a professional school at the end of his third year may extend the option for an additional (but limited) period of time.

Parasitology. This option is designed for students who plan to work in such fields as helminthology, medical arthropodology, and protozoology. This training may be applied to public health services, institutional research, and private practice. The following courses are required: 230, 417, 421, 433, 465, and at least 6 hours selected from 330, 332, 345, 346, 347, 363, 370, 372, and 451 with the approval of the departmental adviser. Supporting courses should be selected in bacteriology, botany, chemistry, physics, and mathematics.

Entomology. This option is designed for students planning to work in insect taxonomy, morphology, natural history, and medical, agricultural, or other aspects of applied entomology. Career opportunities are available in teaching, research, industrial and governmental organizations, or as technicians in museums, quarantine inspection, insect control, and other special services. Required courses for this option are as follows: 230, 330, 332, 334, 433, and at least 4 hours selected from 363, 370, 372, 421, 451, and 465, with the approval of the departmental adviser. Supporting courses in bacteriology, botany, chemistry, and mathematics should also be taken.

Secondary Teaching. The preparation and certification of teachers in biology in secondary schools is a cooperative program between the departments dealing with the biological sciences and the College of Education. Prospective biology teachers should complete either a zoology major and a botany minor, or a botany major and zoology minor. Courses required for this option are Zool. 105, 276 or 376, 212, 213 or 363, 230, 261, 262 or 263, 343 or 345, 346 or 347, 372, 385, and 451. Supporting courses must include Bact. 321, 322; Chem. 101 and 151 or 105 and 106, or 111 and 112; Geol. 101 or 111; Math. 101, 105 and 106 or 111. Recommended supporting courses Agron. 141; Bact. 501; Bot. 335, 455, 460; Geol. 103 or 112; organic chemistry.

Requirements for a Minor

Secondary Teaching Minor in Zoology. Zool. 105, 230, 261, 262 or 263, 343 or 345, 346 or 347, 372, 385.

Secondary Teaching Minor in Biology. Bot. 101, 105, 276 or Zool. 276; Zool. 105, 212, and two courses selected from Bact. 121; Bot. 110, 440; Zool. 261, 262 or 263, 230. This minor will **not** satisfy the requirements for a teaching minor. When zoology or botany is selected as a secondary teaching major in biology.

General Departmental Minor. Zool. 105, 276 or 376, 212, 213 or 363, 230 or 261 plus 262 or 263. This minor will **not** satisfy the requirements for a teaching minor in secondary education.

Graduate Degrees

The Department of Zoology and Entomology offers work leading toward the Master of Science and Doctor of Philosophy degrees in zoology or in entomology.

A student may pursue research work in specific areas of zoology and entomology in such fields as anatomy, ecology, embryology, genetics, histology, morphology, natural history, parasitology, physiology, radiation biology, and taxonomy. Either one or two minors may be selected, and it is recommended that at least one minor be chosen from a department other than zoology and entomology.

Graduate Credit for Seniors. If, during the last semester of the senior year, a candidate for a baccalaureate degree finds it possible to complete all requirements for such a degree with a registration of fewer than sixteen hours of undergraduate credit, he may register for graduate credit to the extent that the total registration shall not exceed sixteen hours during the semester. A form provided by the Office of the Graduate Dean stating that all baccalaureate requirements are being met during the current semester must be signed by the appropriate undergraduate dean and presented to the dean of the Graduate School prior to such registration. This registration does not constitute permission to seek a higher degree.

Courses

105. **Animal Biology.** (3:3:2) F.S.Su. (G-BS m) Staff
A basic principles course in animal biology.
212. **Invertebrate Zoology.** (4:1:6) F.S. (G-BS m) Prerequisite: Zool. 105. Beck
A basic course in the structure, classification, and natural history of the invertebrates.
213. **Vertebrate Zoology.** (4:2:4) F.S. (G-BS m) Prerequisite: Zool. 105. Hayward
A basic course in the structure, classification, and natural history of the vertebrates.
230. **Introductory Entomology.** (4:2:4) F.S. (m) Prerequisite: Zool. 105. Staff
The beginning course in the structure, classification, and life histories of the classes of arthropods.
261. **Elementary Human Physiology.** (3:3:0) F.S.Su. (G-BS m) Prerequisites: Zool. 105 and concurrent registration in Zool. 262 or 263. Chapman, Jaussi
A basic course in tissue and organ structure and function.
262. **Anatomy and Physiology Laboratory.** (2:0:4) F.S.Su. (G-BS m) Prerequisite: concurrent enrollment in Zool. 261. Staff
This laboratory course is designed for physical education and nursing students.
263. **Elementary Physiology Laboratory.** (1:0:2) F.S.Su. (G-BS m) Prerequisite: concurrent enrollment in Zool. 261. Staff
This laboratory course is for those not in physical education and nursing.
276. **Heredity.** (3:3:0) F.S.Su. (G-BS m) Prerequisite: Zool. 105 or Bot. 101. Allen
Principles of inheritance. Designed for students not majoring in biological science.
315. **Natural History.** (3:2:2) S. (G-BS) Prerequisite: Zool. 105 or Bot. 101. Frost
Designed for the nonbiology majors and dealing with common animals.
330. **Insect Morphology.** (5:2:6) F. Prerequisite: Zool. 230. Wood
An introduction to the principles of insect morphology. Both external and internal anatomy are studied.
332. **Insect Classification.** (4:1:6) S. Prerequisite: Zool. 230. Wood
The basic principles of animal taxonomy with special emphasis on insects. Students are advised to consult the instructor and begin collecting insects prior to registration.
334. **Economic Entomology.** (3:2:2) S. (m) Prerequisite: Zool. 105. (Offered alternate years.) Staff
Life histories and control of insect pests, exclusive of medically important forms.

- 343. Ichthyology.** (2:0:4) F. (m) Prerequisite: Zool. 105; recommended: Zool. 213. V. Tanner
The anatomy, classification, and distribution of the fishes of the Great Basin.
- 345. Herpetology.** (2:0:4) S. (m) Prerequisite: Zool. 105; recommended: Zool. 213. W. Tanner
The classification, distribution, and natural history of reptiles and amphibians.
- 346. Ornithology.** (2:0:4) S. (m) Prerequisite: Zool. 105; recommended: Zool. 213. Hayward
The classification, field and laboratory identification, and natural history of birds.
- 347. Mammalogy.** (2:0:4) F. (m) Prerequisite: Zool. 105; recommended: Zool. 213. Hayward
The classification, field and laboratory identification, and natural history of mammals.
- 357. Wildlife Conservation.** (2:2:0) F. Frost
Conservation of natural resources particularly as they relate to animals.
- 363. Comparative Vertebrate Anatomy.** (4:2:4) F.S. Prerequisite: Zool. 105. W. Tanner
A comparison of the body systems of the major vertebrate groups from the fishes through the mammals.
- 370. Vertebrate Histology.** (3:1:4) S. Prerequisite: Zool. 213 or 363. Chapman
Microscopic studies of the tissues and organs of vertebrates.
- 371. Histological Technique.** (2:0:4) F. Prerequisite: Zool. 105. Chapman
Preparation of microscopic slides of tissues.
- 372. Biological Techniques.** (1:0:3) F. (m) Frost
Designed to help prospective teachers and biologists in the techniques of preparing biological specimens and materials for demonstration or study.
- 373. Vertebrate Embryology.** (4:2:6) F. Prerequisite: Zool. 213 or 363. Allen
Development of the body systems of vertebrates with special emphasis on the frog, chick, and pig.
- 374. Pathology of Organs of Vision.** (2:2:0) F.Su. Prerequisite: Zool. 261. Staff
Study of the structure, function, pathology, and hygiene of the eye.
- 376. Genetics** (4:3:3) S. (G-BS m) Prerequisite: Zool. 105 or Bot. 101. Allen
An introductory course designed for majors in biological science.
- 385. History of Biology.** (2:2:0) S. V. Tanner
The development of biological thought from the Grecian period to the present.
- 417. Parasitology.** (3:2:4) F. Prerequisite: Zool. 105. Allred
Animals that are internal parasites of man and domestic animals.
- 421. Arthropodology.** (2:0:6) F. (Offered alternate years.) Prerequisite: Zool. 230. Allred
Structure, identification, and natural history of local arthropods other than insects.
- 433. Medical Entomology.** (2:1:4) S. (Offered alternate years.) Prerequisite: Zool. 230. Allred
Arthropods that attack man and domestic animals and transmit pathogenic organisms and other parasites.

451. **Animal Ecology.** (3:2:3) S. Prerequisites: Zool. 212, 213, 230; recommended: Bot. 110 and Zool. 421. Murphy
The principles of ecology as applied particularly to animals in natural communities. Saturday field trips.
465. **Animal Physiology.** (4:4:3) S. Prerequisites: Zool. 213 or 363 and 10 hours of chemistry. Three lecture periods, one one-hour quiz period, and one three-hour laboratory period. Jaussi
The functions of the body systems of animals.
- 496, 497. **Senior Year Seminar.** (1:1:0 ea.) F.S. Staff
A review of current trends and concepts in zoology.
510. **Zoological Literature.** (2:1:2) F. Wood
An introduction to the literature of zoology designed to prepare the student for research and thesis writing.
524. **Acarology.** (2:0:6) F. (Offered alternate years.) Allred
531. **Insect Physiology.** (2:1:2) S. (Offered alternate years.) Wood
533. **Field Entomology.** (2:0:4) Su. Prerequisite: consent of instructor. Staff
538. **Immature Insects.** (2:0:4) S. Staff
540. **Aquatic Ecology.** (3:2:3) F. Prerequisites: Zool. 451 or Bot. 450. Murphy
555. **Principles of Zoogeography.** (2:2:0) F. (Offered alternate years,) W. Tanner
561. **Advanced Vertebrate Anatomy.** (3:1:4) F. Prerequisite: Zool. 363. W. Tanner
562. **Advanced Vertebrate Anatomy.** (3:1:4) S. Prerequisite: Zool. 363. Chapman
563. **Etiology and Educational Implications of Brain Injury.** (3:2:2) S.Su. Chapman
Prerequisite: consent of instructor.
564. **Neurology.** (2:1:2) F. Prerequisite: consent of instructor. Chapman
565. **Endocrinology.** (3:3:0) S. (Offered alternate years.) Prerequisite: Zool. 465 or equivalent. Jaussi
573. **Experimental Embryology.** (2:1:3) S. (Offered alternate years.) Pre-Allen
requisite: Zool. 373.
578. **Radiation Biology.** (2:2:0) F. (Offered alternate years.) Prerequisites: Chem. 106 or 112; Physics 202; Zool. 465; recommended: Physics 303. Allen
579. **Radiation Biology Laboratory.** (2:0:6) F. (Offered alternate years.) Pre-Allen
requisite: concurrent registration in Zool. 578.
591. **Special Problems in Zoology.** (1-2:Arr.:Arr.) F.Su. Staff
592. **Special Problems in Zoology.** (1-2:Arr.:Arr.) S.Su. Staff
- 594A,B. **Seminar in Genetics.** (2:2:0 ea.) F. (Offered alternate years.) Pre-Allen
requisite: Zool. 376 or Bot. 376.
610. **Systematic Zoology.** (2:1:2) F. Staff
612. **Advanced Invertebrate Zoology.** (2:0:4) F. Prerequisite: Zool. 540. Beck
625. **Advanced Medical Entomology.** (2:0:4) S. Prerequisites: Zool. 332, 346, 347. Staff
628. **Ecology of Parasitic Arthropods.** (2:1:3) S. (Offered alternate years.) Allen
Prerequisites: Zool. 433, 451.
639. **History of Entomology.** (1:1:0) F. Staff

643. **Advanced Ichthyology.** (2:1:2) F. (Offered alternate years.) Prerequisite: Zool. 343. V. Tanner
645. **Advanced Herpetology.** (2:1:2) S. (Offered alternate years.) Prerequisite: Zool. 345. W. Tanner
650. **Animal Communities.** (2:2:0) S. (Offered alternate years.) Prerequisite: Zool. 451 or Bot. 450. Murphy
662. **Advanced Physiology.** (2:1:2) F. Prerequisite: Zool. 465. Jaussi
663. **Advanced Physiology.** (2:1:3) S. Prerequisite: Zool. 465 or equivalent. Jaussi
670. **Advanced Histology.** (2:0:4) F. Prerequisite: Zool. 370. Chapman
680. **Theoretical Zoology.** (2:2:0) S. Prerequisite: consent of instructor. W. Tanner
- 690A,B. **Advanced Topics in Animal Ecology.** (2:2:0 ea.) F. Prerequisite: Zool. 451. Staff
A seminar-discussion type course dealing with specific areas within the general framework of ecology, both terrestrial and aquatic.
- 691A,B,C,D. **Research.** (1-4:Arr.:Arr. ea.) F.S.Su. Staff
- 694A,B. **Advanced Topics in Ornithology and Mammalogy.** (2:2:0) F. Prerequisites: Zool. 346, 347. Frost, Hayward
- 695.A,B. **Seminar in Embryology.** (2:2:0 ea.) S. (Offered alternate years.) Allen
- 696, 697. **Graduate Seminar.** (1:1:0 ea.) F.S. Staff
- 699. **Thesis for Master's Degree.** (2-4:Arr.:Arr.) F.S.Su. Staff
797. **Research.** (2-4:Arr.:Arr.) F.S.Su. Staff
799. **Dissertation for Ph.D. Degree.** (Arr.) F.S.Su. Staff



Class inspecting display of zoological specimens

Division of Continuing Education

- Extension Representative in the Administrative Council: Harvey L. Taylor.
- Office of the Dean: Harold Glen Clark, dean; Phileon B. Robinson, Jr., assistant to the dean; Richard H. Henstrom, academic and center coordinator.
- Department of Community Education: V. Dallas Merrell, chairman; D. Chris Poulos, assistant chairman; W. Grant Lee, supervisor; Vede Gilchrist, supervisor.
- Department of Extension Publications: Lawrence D. Lawlor, chairman.
- Department of Home Study: Lula Clegg, chairman.
- Department of Travel Study: Robert C. Taylor, chairman.
- B.Y.U.-California Adult Education Center: R. Wayne Shute, chairman; Gerhard Jakob Bolli, supervisor.
- B.Y.U.-Ogden Adult Education Center: George S. Haslam, chairman.
- B.Y.U.-Provo Campus Adult Education Center: Robert H. Teichert, chairman; Ilene Webb, supervisor, Evening School; Thomas A. James, supervisor, Special Courses and Conferences.
- B.Y.U.-Ricks Adult Education Center: J. Kenneth Thatcher, chairman; Mack G. Shirley, supervisor.
- B.Y.U.-Salt Lake Adult Education Center: Lynn M. Hilton, chairman; Russell T. McDonald, supervisor; Ray C. Hatch, supervisor; Keith L. Smith, supervisor.

GENERAL INFORMATION

The purpose of the extension services is to bring the educational programs and services of the regular University day school to adults who are not now receiving them. It was called the Extension Division when it was established in 1921. At that time its program combined publicity, off-campus programs, lectures, and community services with the more formal classroom offerings and credit courses both by correspondence and lecture.

Some of these earlier functions have been assumed, in part, by special committees or departments in the University. New services such as motion pictures and audio-visual aids have been expanded or added to the extension services. Full-time employees have replaced those who formerly did extension work during their off-time hours. The extent of the territory served has increased. Bulletins of information on evening school courses, home study subjects, lectures, and publications are available upon request.

Many teachers of the courses scheduled through the extension services are chosen from the regular B.Y.U. faculty. In addition, a special part-time, off-campus faculty is available and is listed in the special instructors or lecturers section of this catalog.

WHO MAY ENROLL IN ADULT EDUCATION CLASSES

Anyone having the proper background may register for noncredit courses. The purpose of adult education is to serve the needs of adult students.

Those who have not graduated from high school should not register for University credit courses without prior approval; however, all persons over nineteen years of age are eligible to register for such courses.

Undergraduate students may not register for graduate classes.

Acceptance as a student in an extension course does not mean that the individual concerned has been accepted by Brigham Young University or any other university on a degree-seeking basis. It is the responsibility of each student to

gain admission to the university of his choice as a degree-seeking student through the normal procedures listed in the university catalog. At B.Y.U. this may be accomplished by contacting the Office of Admissions and Records. All credit received prior to the student's formal admission will then be evaluated.

The Division of Continuing Education at B.Y.U. takes no responsibility for the acceptance of a student's credit courses toward a degree or for accreditation purposes of any nature at any university. Clearing these courses for accreditation of any kind is the responsibility of the student. Such clearance should be made before the student enrolls in the course.

No student who has been suspended from a university or refused admission to B.Y.U. or any other university will be allowed to register for credit courses. However, a suspended student may be accepted as a home study student.

DEPARTMENT OF COMMUNITY EDUCATION

The Department of Community Education of the Division of Continuing Education has provisions to service those areas not already served by a B.Y.U. adult education center.

Descriptions of these sections are listed below. More detailed information and catalogs may be obtained by writing the Department of Community Education, Division of Continuing Education, Brigham Young University, Provo, Utah.

Credit Courses: A request for a credit course is filled by the scheduling of a University teacher to travel to an off-campus location to conduct the course. Credit courses provide regular Brigham Young University credit and may be used to renew a teaching certificate, to apply toward a degree, or to broaden one's intellectual and spiritual horizons. (Ordinarily such classes meet one evening a week for eleven weeks. A wide choice of courses is available. Courses listed in this catalog, subject to the approval of the dean and department chairman concerned, may be scheduled off campus.)

Educational Television: Brigham Young University provides courses through educational television. The school has sponsored several courses over both educational and commercial television facilities. It is hoped that the general public will indicate their interest in B.Y.U. telecourses for credit and noncredit. Further information is available upon request.

Lectures and Other Noncredit Courses: This section of the Division of Continuing Education was created to present noncredit programs off campus—lecture series, seminars, classes appealing to particular interest groups, conferences, forums, and special promotions. The varied curriculum includes programs in religion, the fine arts, engineering, athletics, and many specialized fields. Since this section is on a noncredit basis, its program need not be concerned specifically with filling requirements but may be geared to the special needs and desires of the groups. Presentations are informative and informal but of high academic quality. Persons desiring courses or lectures to be presented in their locale may initiate them by contacting this office.

Education Week and Education Day Programs: The Education Week (formerly called Leadership Week) held annually on the Brigham Young University campus has gained a nationwide reputation. This program is now being extended to other areas of the Church. Education Week programs have been approved for most of the western United States population centers. Thirty-three Education Weeks were held in 1963 and forty-four are scheduled for 1964. Further expansion is expected.

Education Day programs are Saturday programs patterned after Education Week. They are held in Utah communities and in smaller Church population areas where faculty can fly in on a weekend for a day of classes.

Lecture Circuits: An innovation in University offerings is "lecture circuits." One or two faculty members lecture for one night in Church population centers, traveling a particular circuit. The eastern United States was first covered by such lectures in 1963. Expansion of this type of program is expected as faculty and adequate administration is developed.

DEPARTMENT OF EXTENSION PUBLICATIONS

The Extension Publications Department produces numerous lectures, pamphlets, and other material for distribution to students, faculty, alumni, and patrons of the University. The goal of this service is adult education through the printed page. These materials are sold at cost. The following categories will indicate the kinds of publications available:

Speeches. Most B.Y.U. Devotional talks given by General Authorities and other Church leaders and Forum addresses given by notable guests of the University, usually men of national or world-wide fame, are reproduced in printed form. At the end of each school year complete bound sets of the assembly speeches may be purchased. These are particularly useful in ward and home libraries.

Education Week Lectures. Numerous publications are available which are based on the great variety of subjects discussed in the Education Weeks held on the campus and in other areas. Missionaries, teachers in Church auxiliaries, speakers, and students of the scriptures find these publications stimulating because of the timely stories, interpretations of current events, faith-promoting experience, and supplementary instructional material which they contain.

Special Lecture Series. During each school year, many lectures are given which would be of interest outside of the classrooms or limited meetings in which they originate. Several of these lectures are available in printed form. Examples of those available are "New Testament Conference," "Brigham Young Seminar," "Seminar on the Prophet Joseph Smith, 1961, 1962, 1963," and "Fourteenth Annual Symposium on the Archaeology of the Scriptures."

Pamphlets. Printed booklets are now available in the following six series. Only a brief example of each series is indicated:

Religious Life Series: "Parents and Children—Look to Your Homes." by President David O. McKay, and "Marriage—An Everlasting Covenant," by Elder Harold B. Lee.

Apostle Speaks to Youth Series: "Chastity," by Elder Mark E. Petersen, and "Tragedy or Destiny," by Elder Spencer W. Kimball.

Word of Wisdom Series: "Tobacco and Cancer," by Dr. Alton Ochsner. Others are to appear in the future.

Family Life Series: "Family Fun With Games," by Israel Heaton, and "Your Child's Achievement at School," by Reed H. Bradford.

General Interest Pamphlets: "The Principle and Practice of Paying Tithing," by Ernest L. Wilkinson, and "Learning, an Endless Process," by President Harvey L. Taylor.

Public Affairs Pamphlets: A great many publications have been obtained from other sources and are made available through this department. They pertain to human development and family life. More than sixty titles are included in the general subject areas of expectant parents, infancy, pre-school children, nursery school, the grade school years, adolescence, courtship and marriage, family life, sex education, mental health, and basic viewpoints in child guidance.

Books. Two books are currently sold through this department: **Our Leaders Speak**, a compilation of eternal truths spoken at Brigham Young University by several of the General Authorities, and **Successful Leadership**, a compilation of outstanding talks given in the University's Executive Lecture Series wherein nationally recognized business leaders define their experienced paths to success and make recommendations for successful futures in the lives of others. Other books will be added in the future.

For a free catalog listing all available publications and their prices write to Extension Publications, Brigham Young University, Provo, Utah.

DEPARTMENT OF HOME STUDY

Division of Continuing Education offers home study courses to aid in widening the educational horizons of the many people who cannot take college work in residence.

What is it? Home study is education by mail—instruction with a personal touch.

Why Home Study? Home study is for those who cannot take courses in residence. This department provides courses required for entrance requirements, courses needed to complete high school, teacher certification, courses for those serving their country in the armed forces, or for Korean veterans who wish to maintain their entitlement, for people working in industry who wish to acquire broader culture or to improve their skills, for professional people with a desire for continued intellectual and professional progress, and for those desirous of pursuing some course for personal development and interest.

Catalog. A Home Study Catalog is available without charge to anyone who wishes detailed information on all courses, fees, and registration.

USAFI and Korean Veterans. Brigham Young University has been approved to offer home study courses to the men and women in the armed forces and to Korean veterans.

Credit. The number of credit hours of home study course work that will apply toward graduation requirements is limited to 24 semester hours.

Examinations. Examinations are required in all correspondence courses unless otherwise stipulated.

DEPARTMENT OF TRAVEL STUDY

B.Y.U. travel study programs are designed for students who wish to increase their knowledge and understanding of their own nation and of other lands and peoples through purposeful educational travel under the direction of the University. Those who participate must be properly enrolled. Adults off campus as well as individuals on campus may qualify as students in this program. Participants must adhere to standards of the Church of Jesus Christ of Latter-day Saints.

All of the Brigham Young University travel study programs are noncommercial, nonprofit, educational projects. They are sponsored by a University which recognizes the value of organized educational travel experience and senses the importance of broadening cultural horizons and promoting international understanding and good will.

College credit is provided to all program participants who complete the study course as outlined by the academic department which co-sponsors the travel study program.

Anticipated B.Y.U. 1964-65 Programs

Foreign Residence Programs

1. Spanish Language Study Program in Mexico.
2. French Language Study Program in Quebec.
3. French Language Study Program in Paris.
4. German Language Study Program in Austria.

Traveling Seminars

5. Peoples and Arts Tour of Europe
6. European Highlights Tour
7. Student European Tour
8. European Ancestral Heritage Tour
9. Bible and Book of Mormon Lands Tour
10. Church History Tour
11. Hawaiian Socio-Cultural Tour
12. Around the World
13. Pacific-Orient Circle Tour
14. American Colonial History Tour
15. Early American Homes Tour

B.Y.U. ADULT EDUCATION CENTERS

Sensing the obligation of the Church University to provide education opportunities in harmony with L.D.S. standards for persons away from Provo, the Board of Trustees has established adult education centers. These centers offer the same services of adult education to the people of the center's area, including education week, as those offered to people who live near Brigham Young University. Any student expecting to earn a degree from B.Y.U. may do much of his work at an adult education center, but at least 20 semester credit hours must be earned on the campus in Provo. (See section entitled "Graduation" under Student Academic Services in this catalog for residence requirements.)

B.Y.U. - Provo Campus Adult Education Center

All courses conducted on the Provo campus by the Division of Continuing Education are conducted through the B.Y.U. - Provo Campus Adult Education Center. Flexibility of programming is maintained to meet specific needs of adults and special groups. Business, industrial, civic, social, church and educational institutions are encouraged to contact this office if they desire special adult instruction. The units of this center are listed below:

Evening Classes. On week-day evenings classes are conducted on campus in areas of interest to students who desire to improve or enrich their lives through part-time education.

Regular college credit equivalent to daytime classes is given for all evening school classes. Anyone wishing to do so may take a class on a noncredit basis as an auditor.

Veterans are eligible to enroll under the G.I. Bill if they meet the eligibility requirements of the Veterans' Administration.

A class schedule of all classes offered is published each semester. These class schedules, giving detailed information about all procedures, are available free of charge upon request. Courses listed in the Evening Classes schedule which do not receive ten or more registrations will be cancelled. Students who have registered in cancelled classes will be notified and invited to join other classes or will be given a full refund.

At scheduled times during each registration period, trained counselors are available who will aid students in making educational and vocational plans or in working through related personal problems. There is no charge or obligation to the student for these services.

Day students may enroll in evening classes on their regular registration card by picking up class cards marked "Section 90." An extra fee of \$3.00 per credit hour is charged the day school student for these classes.

One dollar is charged for each change slip presented after the first week of the semester unless the action is caused by the cancellation of an evening class.

Each student registered through extension services who discontinues attendance at class must use the proper procedure to withdraw by coming to the extension center.

A prorated refund of tuition fees will be made to those who withdraw properly from evening classes during the first four weeks of the semester. There is no refund for withdrawals occurring after the fourth week of the semester.

Students registering for evening classes only register from 5:00 to 9:00 p.m. on the dates announced in current schedules.

Special Courses and Conferences. This section, organized to meet the academic needs and desires of many different age and educational background groups, provides flexible, varied credit and noncredit programs on the Brigham Young University campus. It offers courses either for specific interest groups or for the public at large.

Offerings, presented on a high academic level, are informative in nature yet informal and flexible as to content and presentation. Courses are generally six to ten weeks in length.

The instructional staff of Special Courses and Conferences is composed of members of the regular B.Y.U. faculty and other professional and academic

specialists. Tuition fees vary according to the length of the course or the special expenses which may be involved. Persons representing groups which desire special courses or lectures on the B.Y.U. campus may have such courses initiated by contacting this department.

The Special Courses and Conferences section presents programs in the following categories:

Conferences. Programs which are conducted for professional groups in concentrated intensive sessions, usually over a period of one day to one week. These groups often hold business meetings in addition to considering academic materials.

Workshops and Clinics. Programs which involve a high degree of participation and activity by registrants and which include learning of professional and avocational skills.

Special Courses. Credit or noncredit courses which do not fall into the administrative areas of regular classes or of evening school.

Lectures. Short discourses on various academic subjects, sometimes presented in a series or singly.

Seminars. Courses for groups of supervised students or professional persons doing research or advanced study.

On-Campus Education Week. For thirty-nine years, adults from all walks of life have spent their vacations or other spare time attending the five-day festival of learning at Brigham Young University. All of the colleges of the University, through their faculties and off-campus consultants, provide selected educational experiences which help members of the Church and other patrons of the University become better leaders in the professions, the home, the community, and the Church. Education Week is leadership training for everyone, since all in the home are leaders or potential leaders. A few of the areas of instruction are these: human relations, scientific advancements, the world of business, better teaching methods, music, drama and speech activities, teen-age problems, and handicraft arts. Instruction in genealogy, the scriptures, and religious lectures from the General Authorities and others also add greatly to the interest and value of Education Week. Devotional assemblies, evening entertainments, tours, lectures, demonstrations, and workshops enhance the offering of this week. A special youth program is included for those 12-17 years of age.

B.Y.U. - Ricks Adult Education Center

The first center to be established was at Rexburg, Idaho, in July of 1956. In January of 1959, the center headquarters were moved from Ricks College to 160 North Holmes Avenue, Idaho Falls, Idaho. A sub-center is maintained at Ricks College in Rexburg. The center provides off-campus courses, evening school, summer school, Education Week and special programs. On November 15, 1959, a branch of the Department of Audio-Visual Communication of Brigham Young University was established at the B.Y.U. - Ricks center. This service is under the direction of the Rexburg office and is one more important step in the continued expansion of the B.Y.U. - Ricks center. The services of this center have stretched as far as Ontario, Oregon, on the west, and Afton, Wyoming, on the east to offer short courses and credit classes.

B.Y.U. - Ogden Adult Education Center

The Ogden center was officially opened August 10, 1957, to provide the people in and near Ogden with some of the advantages enjoyed by those living close to the Brigham Young University campus. The center provides academic courses in upper division and graduate work and informal courses, lectures, seminars, workshops, and Education Week programs. The center draws its faculty from Brigham Young University and professionally qualified persons living in the Ogden area. Local instructors are approved by the University administration in the same manner used in employing regular full-time faculty members. The center headquarters is at 555-24th Street, Ogden, Utah.

B.Y.U. - Salt Lake Adult Education Center

On January 1, 1959, the building occupied formerly by the McCune School of Music and Art, 200 North Main, was opened as the third B.Y.U. adult education center. Its program follows the pattern established in other centers. Courses and programs are offered in religion, genealogy, speech, history, recreation, writing, arts, education, and other fields. A nursing program and teacher certification program are now available at the Salt Lake center. Special programs are organized for industry, commerce, and church groups where requested. A forum assembly program was also added in the fall of 1959 with noted speakers participating. Full information may be obtained by phoning Salt Lake City, 328-0325. Three growing community education programs are held each year for people in the general Salt Lake area.

B.Y.U. - California Adult Education Center

The newest B.Y.U. adult education center was established in Southern California and is located at 3141 West Century Boulevard, Suite 9, Inglewood, California. This center offers all of the major programs of the other adult education centers. From the center, people in Southern California may take courses for credit or noncredit, participate in Education Weeks in Southern California, receive help and information on travel study, home study, publications and audio-visual materials, etc. Due to the nature of the Southern California population, classes are taken to various areas of the southland instead of bringing students to a central location.

DEPARTMENT OF AUDIO-VISUAL COMMUNICATION

Department of Audio-Visual Communication: LeRoy R. Lindeman, chairman; Maughan Lee, media development supervisor; Lynn Howarth, circulation supervisor; Charles Curtis, instructional materials supervisor; Robert Reese, graphics supervisor; R. Irwin Goodman, educational program supervisor.

The Department of Audio-Visual Communication is one of the largest and most complete instructional materials centers in the nation. Under the direction of a professionally trained and experienced staff, it serves the University, the Church, public schools, and industry with the finest materials for instruction that can be obtained. It also provides assistance in the form of individual help and classes in the selection and effective use of these materials.

The rental library contains more than 8,000 16mm sound motion pictures, 35mm filmstrips, 2" x 2" color slides, sets of study prints, and teaching kits. These materials include both educational and religious subjects as well as some of Hollywood's finest entertainment features. Releases of the Brigham Young University Motion Picture Production Department are among the films available.

The magnetic tape library has more than 2,000 titles including addresses given at the General Conferences of the Church of Jesus Christ of Latter-day Saints, B.Y.U. Forum and Devotional talks as well as other important speeches given on campus. In addition, taped radio programs of an educational nature are available. Tapes may be obtained on a rental basis or for permanent retention.

A large inventory of varied audio-visual equipment is maintained for use on the campus. Church and civic organizations are also permitted to make use of this equipment on a rental basis.

The production of instructional materials by the department falls into three majors areas: (1) graphic art services, (2) photographic services, (3) public address and recording and tape duplicating services. These services exist to provide custom designed instructional materials for teaching programs of the University, church, and community. Anything from a simple line drawing to a sound filmstrip can be professionally produced.

A marketing section maintains and sells audio-visual materials and supplies as well as supervising the sale of B.Y.U.-produced motion pictures and graphic materials.

Further information may be obtained by writing or calling the Department of Audio-Visual Communication. Catalog and supplementary bulletins listing the materials available, conditions of service, and rental rates are also available.

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On matters of overall policy the following meet as an administrative council for the purpose of advising the President and resolving mutual problems: Earl C. Crockett, Acting President; William R. Siddoway, Acting Administrative Assistant; Clyde D. Sandgren, Vice-President and General Counsel; Ben E. Lewis, Vice-President in Charge of Auxiliary and Communications Services; Joseph T. Bentley, Comptroller; J. Elliot Cameron, Dean of Students.

DEANS' COUNCIL

The Deans' Council consists of the administrative council, all deans, and the directors of schools and divisions.

GRADUATE COUNCIL

The chief administrative body for the graduate program is the Graduate Council, which includes the dean of the Graduate School as chairman, the director of research, four members of the graduate faculty elected at large for terms of three years and one member of the graduate faculty elected for a three-year term from each of the areas of subject matter included in the undergraduate colleges. The academic vice-president and the director of libraries are ex officio members of the council. The Graduate Council is empowered to act for the graduate faculty on all student petitions and on departmental requests for approval of faculty members for graduate instruction and supervision, and initiates policy and proposals regarding the graduate program.

EXTENSION SERVICES COUNCIL

The Extension Services Council is an advisory body for the Adult Education and Extension Services.

Faculty

Emeriti

- Owen L. Barnett** Associate Professor Emeritus of Educational Administration
B.S., M.S., Brigham Young University, 1923, 1927. (1950)
- Clarence S. Boyle** Professor Emeritus of Marketing
B.S., Brigham Young University, 1924; M.S., Ed.D., New York University, 1926, 1941.
- William H. Boyle** Professor Emeritus of Education
B.A., M.A., Brigham Young University, 1913, 1923.
- Newbern I. Butt** Assistant Professor Emeritus of Library and Research (1922)
B.S., Utah State University, 1915; M.S., Brigham Young University, 1939.
- Jennie Campbell** Associate Professor Emeritus of Education (1952)
B.S., Brigham Young University, 1928; M.A., Teachers College, Columbia University, 1937.
- Clawson Y. Cannon, Sr.** Professor Emeritus of Animal Husbandry (1956)
B.S., Utah State University, 1913; M.S., Ph.D., Iowa State College, 1924, 1927.

- Elsie C. Carroll** Associate Professor Emeritus of English
B.S., M.A., Brigham Young University, 1926, 1928.
- Parley A. Christensen** Professor Emeritus of English (1927)
B.S., Utah State University, 1914; M.A., Ph.D., Stanford University, 1925, 1927.
- Benjamin F. Cummings** Professor Emeritus of Modern and
B.A., University of Utah, 1913. Classical Languages
- J. Orval Ellsworth** Professor Emeritus of Religion
B.S., Utah State University, 1917; M.S., Ph.D., Cornell University, 1924, 1926.
- Flora D. Fisher** Assistant Professor Emeritus of Education
B.S., M.S., Brigham Young University, 1936, 1949.
- Alvah Fitzgerald** Instructor Emeritus in Religious Education (1956)
B.S., M.S., Brigham Young University, 1928, 1930.
- Harvey Fletcher** Professor Emeritus of Physics; Dean Emeritus
of College of Physical and Engineering Sciences (1952)
B.S., Brigham Young University, 1907; Ph.D., Chicago University, 1911; hon. Sc.D.,
Columbia University, 1935; hon. Sc.D., Kenyon College, 1942; hon. Sc.D., Stevens
Institute of Technology, 1942; hon. Sc.D., Case School of Applied Sciences, 1942;
hon. Sc.D., University of Utah, 1944; hon. Sc.D., Brigham Young University, 1954.
- May C. Hammond** Assistant Professor Emeritus of Education
B.S., M.S., Brigham Young University, 1934, 1949.
- William F. Hansen** Assistant Professor Emeritus of Music
B.S., M.S., Brigham Young University, 1936, 1937.
- Bent F. Larsen** Professor Emeritus of Art
B.A., Brigham Young University, 1912; M.A., University of Utah, 1922.
- Florence Jepperson Madsen** Professor Emeritus of Music
B.M., M.M., Chicago Musical College, 1926, 1927; Doctor of Music, Boguslawski Col-
lege of Music, 1932; B.A. Brigham Young University, 1934; M.M., hon. Doctor of
Music, Chicago College of Music, 1933.
- Franklin Madsen** Professor Emeritus of Music
B.A., M.A., Brigham Young University, 1925, 1931; B.M., 1926; M.M., 1927; B.M.E.,
1928; Mus. Doc., 1929; M.M.E., 1932; hon. Doctor of Music Education, Boguslawski
College of Music, 1933; hon. Doctor of Music Education, Chicago College of Music,
1934.
- Georgia Maeser** Assistant Professor Emeritus of Education
B.S., Brigham Young University, 1928; M.A., Columbia University, 1938.
- Joseph K. Nicholes** Professor Emeritus of Chemistry (1933)
B.A., Brigham Young University, 1916; M.A., Stanford University, 1924.
- Kathryn B. Pardoe** Assistant Professor Emeritus of Speech (1934)
B.A., Brigham Young University, 1934.
- T. Earl Pardoe** Professor Emeritus of Speech
B.A., Brigham Young University, 1925; M.A., University of Southern California,
1931; Ph.D., Louisiana State University, 1936.
- Hermese Peterson** Professor Emeritus of Education
B.S., Brigham Young University, 1928.
- Hugh W. Peterson** Professor Emeritus of Education (1927)
B.A., M.A., Brigham Young University, 1916, 1928; Ph.D., State University of Iowa,
1936.
- M. Wilford Poulson** Professor Emeritus of Psychology
B.A., Brigham Young University, 1914; M.A., University of Utah, 1919.
- J. Wyley Sessions** Professor Emeritus of Religious Philosophy
B.S., Utah State University, 1911; M.A., University of Idaho, 1928.
- William H. Snell** Professor Emeritus of Industrial Arts
B.A., M.S., Brigham Young University, 1918, 1939.
- Margaret Summerhays** Assistant Professor Emeritus of Music
Graduate, New England Conservatory of Music, 1916; B.A., Brigham Young Univer-
sity, 1936.

- Orea B. Tanner** Associate Professor Emeritus of English (1938)
B.A., Brigham Young University, 1932; M.A., Columbia University, 1953.
- Effie Warnick** Professor Emeritus of Home Economics
B.S., Utah State University, 1914; M.S., Iowa State College, 1937.
- Golden L. Woolf** Professor Emeritus of Educational Administration (1934)
B.A., M.A., Brigham Young University, 1934, 1936; Ed.D., University of California, 1940.

Members of the Instructional and Administrative Staff

- Margaret Adamson** Assistant Professor of Nursing (1961)
B.S., University of Utah, 1960; M.N., New York University, 1961.
- *George M. Addy** Associate Professor of History (1957)
B.A., M.A., Brigham Young University, 1948, 1950; Ph.D., Duke University, 1957.
- Lorna Call Alder** Assistant Professor of Elementary Education (1949)
B.S., Brigham Young University, 1935; M.A., Columbia University, 1940.
- Zane G. Alder** Assistant Professor of English (1955)
B.S., M.S., Utah State University, 1948, 1956.
- A. Lester Allen** Professor of Zoology (1954)
B.A., Ph.D., University of California at Los Angeles, 1946, 1951.
- Beulah Ream Allen** Professor of Nursing; Dean of the
College of Nursing (1961)
Diploma, Illinois Training School for Nurses, Cook County Hospital, Chicago, Illinois, 1922; B.A., University of Utah, 1928; M.D., University of California, 1932.
- Dell K. Allen** Special Instructor in Industrial Education (1960)
B.S., Utah State University, 1954.
- James B. Allen** Assistant Professor of History
B.S., Utah State University, 1954; M.A., Brigham Young University, 1956; Ph.D., University of Southern California, 1963.
- *Mark K. Allen** Professor of Psychology (1946)
B.A., Brigham Young University, 1926; M.A., Stanford University, 1935; Ph.D., Stanford University, 1955.
- Mary I. Allen** Instructor in English (1963)
B.A., M.A., Brigham Young University, 1962, 1963.
- Penelope M. Allen** Instructor in English (1963)
B.A., San Jose State College, 1961; M.A., Brigham Young University, 1963.
- *Stephen L. Alley** Professor of Educational Philosophy (1956)
B.S., M.S., University of Utah, 1947, 1951; Ed.D., Harvard University, 1958.
- Grace H. Allphin** Instructor in Library Science (1956)
A.B., University of Utah, 1931; Certificate in Library Science, Brigham Young University, 1956.
- Dorald M. Allred** Associate Professor of Zoology and Entomology (1956)
B.A., M.A., Brigham Young University, 1950, 1951; Ph.D., University of Utah, 1954.
- Mildred E. Allred** Assistant Professor of Nursing (1954)
Diploma, Latter-day Saints Hospital, Salt Lake City, 1925; C.P.H.N., Oregon, 1941; B.S., Brigham Young University, 1943; M.N., University of Washington, 1960.
- R. Chase Allred** Associate Professor of Agronomy (1955)
B.S. Brigham Young University, 1948; M.S., Kansas State College, 1949; Ph.D., University of Nebraska, 1952.
- *R. LaMar Allred** Special Instructor in Botany (1963)
B.A., Brigham Young University, 1958.
- Mignon H. Alward** Instructor in Nursing (1953)
Diploma, Latter-day Saints Hospital, Salt Lake City, 1945; B.S., University of Utah, 1946.
- C. Dixon Anderson** Assistant Professor of Modern Languages (1956)
B.A., Brigham Young University, 1953; M.A., University of Texas, 1956.

- Keith P. Anderson** Professor of Chemistry (1953)
B.A., Brigham Young University, 1946; Ph.D., Cornell University, 1950.
- Richard L. Anderson** Professor of History and Scripture (1955)
B.A., M.A., Brigham Young University, 1951, 1957; LL.B. Harvard University, 1954;
Ph.D., University of California, 1962.
- Sharel Anderson** Instructor in Physical Education for Women (1961)
B.S., M.S., Utah State University, 1958, 1960.
- Stephen J. Anderson** Special Instructor in Communications (Radio-
Television) (1963)
B.A., Brigham Young University, 1960.
- Vernon L. Anderson** Professor of Modern Languages (1956)
B.A., M.A., University of Utah, 1948, 1949; Ph.D., Stanford University, 1954.
- Wilson K. Anderson** Assistant Professor of Religious Instruction (1962)
B.S., University of Utah, 1949; M.Ed., Brigham Young University, 1957.
- Hyrum L. Andrus** Professor of Scripture (1956)
B.S., Ricks College, 1951; M.S., Brigham Young University, 1952; D.S.S., Syracuse
University, 1955.
- J. Roman Andrus** Professor of Art and Education (1943)
B.S., M.S., Brigham Young University, 1942, 1943; Ed.D., University of Colorado,
1958; Art Students League, L. A. Art Institute.
- Roman R. Andrus** Assistant Professor of Business Management (1962)
B.S., Brigham Young University, 1958; M.S., Columbia University, 1959.
- Chris J. Apostol** Instructor in Physical Education (1959)
B.A., Utah State University, 1950.
- Nadine T. Ashby** Instructor in Business Education (1960)
B.A., Brigham Young University, 1936; M.A., Colorado State College, 1959.
- Clarence D. Ashton** Associate Professor of Horticulture (1951)
B.S., Brigham Young University, 1929.
- Hyrum J. Babcock** Associate Professor of Elementary Education (1954)
B.A., M.A., Ph.D., University of California, 1939, 1940, 1953.
- Milton V. Backman, Jr.** Professor of History of Religion (1960)
B.S., M.A., University of Utah, 1954, 1955; Ph.D., University of Pennsylvania, 1959.
- Sherwin H. Baer** Associate Professor of Speech and Hearing (1962)
B.S., University of Utah, 1954; M.S., Brigham Young University, 1955; Ph.D., Ohio
State University, 1958.
- Joseph H. Baird** Assistant Professor of Teacher Education (1963)
B.S., M.S., University of Utah, 1954, 1954; Ed.D., University of California at Berkeley,
1962.
- *Rey L. Baird** Instructor in Languages (1961)
B.A., University of Utah, 1960; M.A., Brigham Young University, 1962.
- Bertrand L. Ball, Jr.** Assistant Professor of Languages (1962)
B.A., University of Redlands, 1953; M.A., Ph.D., University of Southern California,
1958, 1960.
- Ver Don W. Ballantyne** Special Instructor in English (1963)
B.S., Brigham Young University, 1961.
- *Ariel S. Ballif** Professor of Sociology (1938)
B.S., Brigham Young University, 1925; M.A., Ph.D., University of Southern California,
1937, 1945.
- Jae R. Ballif** Assistant Professor of Physics (1962)
B.S., Brigham Young University, 1953; M.A., Ph.D., University of California at Los
Angeles, 1961, 1962.
- Richard Ballou** Assistant Professor of Music (1951)
B.A., M.A., Brigham Young University, 1948, 1953.
- Blauer L. Bangerter** Associate Professor of Physical Education (1953)
B.A., Brigham Young University, 1951; M.S., Ph.D. University of Utah, 1955, 1964.

- Reid E. Bankhead** Associate Professor of Religious Instruction (1949)
B.S., University of Utah, 1947; M.Th., Brigham Young University, 1949.
- Dee H. Barker** Professor of Chemical Engineering (1959)
B.S., Ph.D., University of Utah, 1948, 1951.
- Frances P. Barlow** Assistant Professor of Family Life Education (1954)
B.S., University of Utah, 1933; M.Ed., Utah State University, 1938.
- Minnie Barlow** Special Instructor in Weaving and Home
Furnishings (1956)
B.S., University of Utah, 1920; M.A., Columbia University, 1936.
- Howard W. Barnes** Instructor in Business Management (1964)
B.A., Harvard University, 1955; M.B.A., University of Southern California, 1963.
- *J. Dean Barnett** Associate Professor of Physics (1958)
B.A. University of Utah, 1954; Ph.D., University of Utah, 1959.
- Vesta Barnett** Assistant Professor in Housing and Home Management (1956)
B.S., M.Ed., Brigham Young University, 1932, 1954.
- *Ivan J. Barrett** Assistant Professor of Religious Instruction (1953)
B.S., Utah State University, 1938; M.S., Brigham Young University, 1947.
- Howard H. Barron** Associate Professor of Religious Instruction (1953)
B.S. M.S., Utah State University, 1943, 1950; Ed.D., University of Utah, 1953.
- Cliff S. Barton** Professor of Civil Engineering (1959)
B.S., Utah State University, 1947; M.S., Ph.D., Rensselaer Polytechnic Institute,
1953, 1959.
- J. LaVar Bateman** Professor of Speech (1949)
B.A., Brigham Young University, 1941; M.S., Ph.D., University of Wisconsin, 1947,
1950.
- Edith Bartholomew Bauer** Professor of Educational Psychology (1945)
B.A., M.A., Brigham Young University, 1930, 1946; Ph.D., University of California
(Berkeley), 1956.
- D Elden Beck** Professor of Zoology and Entomology (1938)
B.A., M.A., Brigham Young University, 1929, 1930; Ph.D., Iowa State College, 1933.
- *Jay V. Beck** Professor of Bacteriology (1951)
B.A., M.A., Brigham Young University, 1933, 1936; Ph.D., University of California
(Berkeley), 1940.
- *Wayne B. Beebe** Assistant Professor of Mechanical Engineering (1958)
B.S., M.S., California Institute of Technology, 1951, 1952.
- Elouise M. Bell** Instructor in English (1963)
B.A., University of Arizona, 1957; M.A., Brigham Young University, 1959.
- *R. DerMont Bell** Associate Professor of Business Education (1957)
B.S., M.S., Brigham Young University, 1955, 1956; Ph.D., University of Southern
California, 1960.
- B. West Belnap** Professor of Religious Education; Dean of College of
Religious Instruction, (1951)
B.S., Brigham Young University, 1946; M.A., Ed.D., Columbia University, 1950, 1951.
- W. Dwayne Belt** Associate Professor of Secondary Education (1961)
B.A., Brigham Young University, 1952; M.A., Ed.D., Colorado State College, 1958,
1961.
- Erma Bennett** Clinical Instructor in Education (1956)
B.S., M.S., Brigham Young University, 1936, 1959.
- George C. Bennion** Special Instructor in English (1961)
B.A., Brigham Young University, 1949.
- Marion Bennion** Professor of Food and Nutrition (1952)
B.S., Utah State University, 1947; M.S., Teachers College, Columbia University,
1949; Ph.D., University of Wisconsin, 1956.
- Robert C. Bennion** Assistant Professor of Psychology (1961)
B.A., Brigham Young University, 1956; M.A., Ph.D., Ohio State University, 1959,
1961.

- Anthony I. Bentley** Assistant Professor of Religious Instruction (1954)
B.A., Brigham Young University, 1930; M.A., University of Southern California, 1940.
- Joseph T. Bentley** Comptroller; Associate Professor of Accounting
B.S., M.S., Brigham Young University, 1928, 1954; C.P.A., State of Utah, 1946.
- John T. Bernhard** Dean of College of Humanities and Social Sciences;
Professor of Political Science (1959)
B.S., Utah State University, 1941; M.A., Ph.D., University of California at Los Angeles, 1949, 1951.
- LaMar C. Berrett** Assistant Professor of Religious Instruction
B.S., University of Utah, 1952; M.S., Ed.D., Brigham Young University, 1960, 1963.
- Paul Orin Berrett** Assistant Professor of Electrical Engineering (1964)
B.S., University of Utah, 1953; M.S., University of Southern California, 1955.
- William E. Berrett** Vice-President; Professor of Religion
B.A., LL.B., University of Utah, 1924, 1933.
- Max J. Berryessa** Professor of Elementary Education (1963)
B.S., M.S., Brigham Young University, 1948, 1949; Ed.D., Stanford University, 1959.
- *Brian S. Best** Instructor in English (1960)
B.S., M.A., Brigham Young University, 1958, 1962.
- James L. Bills** Assistant Professor of Chemistry (1962)
B.S., University of Utah, 1958; Ph.D., Massachusetts Institute of Technology, 1963.
- Harold J. Bissell** Professor of Geology (1938)
B.S., Brigham Young University, 1934; M.S., Ph.D., University of Iowa, 1936, 1948.
- Angus U. Blackham** Professor of Chemistry (1952)
B.A., Brigham Young University, 1949; M.A., Ph.D., University of Cincinnati, 1950, 1952.
- *Robert W. Blair** Instructor in English (1959)
B.A., M.A., Brigham Young University, 1955, 1957.
- *Mable Blanch** Special Instructor in English (1958)
B.A., Brigham Young University, 1950.
- T/Sgt. Paul V. Boman** Instructor in Air Science (1958)
- *Robert S. Boren** Instructor in Speech (1961)
B.A., M.A., Brigham Young University, 1958, 1960.
- Catherine Bowles** Clinical Instructor in Education (1960)
B.S., M.Ed., Brigham Young University, 1936, 1953.
- Reed H. Bradford** Professor of Sociology (1946)
B.A., Brigham Young University, 1937; M.A., Louisiana State University, 1939;
M.A., Ph.D., Harvard University, 1941, 1946.
- Merrill K. Bradshaw** Assistant Professor of Music (1957)
B.A., M.A., Brigham Young University, 1954, 1955; M.Mus., University of Illinois, 1956; D.Mus.A., University of Illinois, 1962.
- Willard H. Bradshaw** Assistant Professor of Bacteriology (1961)
B.S., M.S., Brigham Young University, 1952, 1953; Ph.D., University of California, 1957.
- Floyd E. Breinholt** Assistant Professor of Art (1961)
B.S., M.E., Brigham Young University, 1937, 1953.
- Robert H. Breinholt** Instructor in Business Management (1963)
B.S., University of Utah, 1960; M.B.A., Harvard University, 1963.
- Luella Edna Briick** Assistant Professor of Nursing (1960)
B.S., University of California, 1959; M.A., University of Washington, 1960.
- *Willis H. Brimhall** Assistant Professor of Geology (1956)
B.S., Brigham Young University, 1949; M.S., University of Arizona, 1951; B.E.S., Brigham Young University, 1960.
- Ralph A. Britsch** Professor of English (1938)
B.A., M.A., Brigham Young University, 1933, 1951.

- H. Smith Broadbent** Professor of Chemistry (1946)
B.S., Brigham Young University, 1942; Ph.D., Iowa State College, 1946.
- Edwin Garth Brown** Director of School of Social Work; Assistant
Professor of Sociology (1964)
B.S., Brigham Young University, 1953; M.S., University of Utah, 1959.
- J. Richard Brown** Assistant Professor of Elementary Education (1956)
B.S., M.Ed., Brigham Young University, 1949, 1956.
- Thomas H. Brown** Associate Professor of Languages (1959)
B.A., Brigham Young University, 1955; M.A., Ph.D., University of Illinois, 1957,
1960.
- Loren C. Bryner** Professor of Chemistry (1935)
B.S., M.S., Brigham Young University, 1928, 1930; Ph.D., Iowa State College, 1934.
- Maurine F. Bryner** Special Instructor in Food and Nutrition (1957)
B.S., Brigham Young University, 1928.
- *Harold S. Budge** Instructor in Psychology (1960)
B.S., M.S., Utah State University, 1958, 1960.
- Kenneth C. Bullock** Professor of Geology (1943)
B.S., M.A., Brigham Young University, 1940, 1942; Ph.D., University of Wisconsin,
1949.
- Robert E. Bunker** Instructor in Physical Education (1949)
B.S., Utah State University, 1937.
- M. Dallas Burnett** Assistant Professor of Communications
(Journalism) (1958)
B.S., Brigham Young University, 1954; M.S.J., Northwestern University, 1958.
- Wesley Burnside** Assistant Professor of Art (1958)
B.S., M.S., Brigham Young University, 1941, 1949.
- Percy E. Burrup** Professor of Educational Administration (1952)
B.S., M.S., Utah State University, 1932, 1941; Ed.D., Colorado State College of
Education, 1951.
- Alma P. Burton** Assistant Administrator of Seminaries and Institutes;
Professor of Religion (1948)
B.S., Utah State University, 1948; M.S., Brigham Young University, 1950; Ed.D.,
University of Utah, 1957.
- A/1C Wilford W. Burton** Instructor in Air Science (1960)
- Douglas P. Bush** Instructor in Library Science
B.S., Brigham Young University, 1959; M.A., University of Washington, 1961.
- *Jess R. Bushman** Associate Professor of Geology (1955)
B.A., Brigham Young University, 1949; Ph.D., Princeton University, 1959.
- *Richard L. Bushman** Assistant Professor of History (1960)
B.A., Ph.D., Harvard University, 1955, 1961.
- Eliot A. Butler** Associate Professor of Chemistry (1956)
B.S., Ph.D., California Institute of Technology, 1952, 1956.
- Edwin J. Butterworth** Assistant Professor of Journalism (1949)
B.A., University of Utah, 1950; M.A., Brigham Young University, 1954
- Glen H. Calder** Assistant Professor of Civil Engineering (1955)
B.S., M.S., Utah State University, 1952, 1953.
- *C. Boyd Call** Instructor in Physical Education (1960)
B.S., University of Utah, 1950; Physical Therapy Certificate from Children's Hos-
pital in Los Angeles, 1953; M.S. Brigham Young University, 1963.
- Ivan T. Call** Assistant Professor of Business Management (1963)
B.S., Brigham Young University, 1958; M.B.A., Indiana University, 1959.
- Sterling G. Callahan** Professor of Secondary Education (1953)
B.A., Brigham Young University, 1937; M.A., George Washington University, 1947;
Ed.D., University of Virginia, 1953.

- J. Elliot Cameron** Professor of Education; Dean of Students (1962)
B.S., M.S., Brigham Young University, 1949, 1949.
- Eugene E. Campbell** Professor of History (1956)
B.A., M.A., University of Utah, 1939, 1940; Ph.D., University of Southern California, 1952.
- L. Howard Campbell** Assistant Professor and Director of Institutional Research (1962)
B.S., M.B.A., University of Utah, 1955, 1957.
- Major John O. Canfield** Assistant Professor of Air Science (1961)
B.S., Utah State University, 1950.
- *Clawson Y. Cannon, Jr.** Assistant Professor of Music (1949)
B.M., Eastman School of Music, University of Rochester, 1948; Diploma, Konservatorium Zurich, 1953; B.A., M.A., Brigham Young University, 1954, 1955.
- John N. Cannon** Assistant Professor of Mechanical Engineering (1957)
B.S.M.E., M.S., University of Utah, 1952, 1955.
- Kenneth L. Cannon** Professor of Family Life Education (1956)
B.S., Brigham Young University, 1935; M.S., Ph.D., Iowa State College, 1948, 1954.
- *Mark W. Cannon** Associate Professor of Political Science (1961)
B.A., University of Utah, 1949; M.P.A., M.A., Ph.D., Harvard University, 1953, 1954, 1961.
- Louis B. Cardon** Assistant Professor of History (1960)
B.A., University of Arizona, 1950; M.A., University of California at Berkeley, 1957.
- June Carlisle** Clinical Instructor in Education (1956)
B.S., M.S., Brigham Young University, 1958, 1960.
- Gary Carlson** Director of Computer Center; Associate Professor of Computer Science (1963)
B.A., M.A., Ph.D., University of California at Los Angeles, 1956, 1958, 1962.
- Melvin W. Carter** Associate Professor of Statistics (1961)
B.S., Arizona State University, 1952; M.S., Ph.D., North Carolina State, 1954, 1956.
- Arthur O. Chapman** Associate Professor of Zoology (1959)
B.A., Brigham Young University, 1941; M.A., University of Kansas, 1949; Ph.D., University of Nebraska, 1953.
- A. Norton Chaston** Assistant Professor of Electrical Engineering (1957)
B.S., University of Utah, 1951.
- Diane R. Chatwin** Instructor in Physical Education (Women) (1958)
B.A., University of Utah, 1956; M.S., University of Wisconsin, 1957.
- Thomas E. Cheney** Associate Professor of English (1945)
B.S., Utah State University, 1930; M.A., University of Idaho, 1936.
- Margaret Potter Childs** Assistant Professor of Clothing and Textiles (1946)
B.S., Brigham Young University, 1939; M.S., Oregon State College, 1949.
- Dean C. Christensen** Professor of Secondary Education (1957)
B.S., M.S., Utah State University, 1938, 1948; Ed.D., University of Oregon, 1957.
- Earl M. Christensen** Professor of Botany (1949)
B.S., M.S., University of Utah, 1947, 1949; Ph.D., University of Wisconsin, 1954.
- Edward L. Christensen** Professor of Business Education (1953)
B.S., M.S., Ph.D., University of Utah, 1938, 1939, 1953.
- *James J. Christensen** Associate Professor of Chemical Engineering (1957)
B.S., M.S., University of Utah, 1953, 1956; Ph.D., Carnegie Institute of Technology, 1957.
- Ross T. Christensen** Associate Professor of Archaeology (1952)
B.A., M.A., Brigham Young University, 1943, 1947; Ph.D., University of Arizona, 1956.
- John R. Christiansen** Professor of Sociology (1957)
B.S., M.S., Utah State University, 1949, 1952; Ph.D., University of Wisconsin, 1955.
- Bruce B. Clark** Professor of English (1950)
B.A., University of Utah, 1943; M.A., Brigham Young University, 1948; Ph.D., University of Utah, 1951.

- Harold Glen Clark** Professor of Education; Dean of Adult Education and Extension Services (1946)
B.S., Brigham Young University, 1928; M.S., University of Southern California, 1934; Ed.D., George Washington University, 1942.
- *Hazel Clark** Clinical Instructor in Education (1952)
B.S., University of Utah, 1938; M.S., Brigham Young University, 1957.
- Herald R. Clark** Professor of Finance and Banking (1913)
B.A., Brigham Young University, 1918; M.B.A., University of Washington, 1924.
- *J. Reuben Clark, III** Associate Professor of Modern Languages (1941)
B.A., University of Utah, 1934.
- James R. Clark** Professor of Religious Education (1938)
B.A., M.A., Brigham Young University, 1936, 1944; Ed.D., Utah State University, 1958.
- Marden J. Clark** Professor of English (1949)
B.A., M.A., Brigham Young University, 1948, 1949; Ph.D., University of Washington, 1957.
- Monroe H. Clark** Associate Professor of Philosophy of Education and Guidance (1945)
B.A., Columbia University, 1923; M.A., Brigham Young University, 1927.
- Wayne W. Clark** Associate Professor of Economics (1962)
B.A., Brigham Young University, 1952; Ph.D., Texas A & M, 1960.
- *Welsford H. Clark** Clinical Instructor in Education (1956)
B.S., M.S., Brigham Young University 1956, 1962.
- A. John Clarke** Professor of Educational Administration (1947)
B.S., M.S., Brigham Young University, 1938, 1942; Ed.D., Colorado University, 1950.
- John C. Clegg** Associate Professor of Electrical Engineering (1961)
B.S., M.S., Ph.D., University of Utah, 1949, 1954, 1957.
- Morris M. Clinger** Associate Professor of Speech (1936)
B.A., M.A., Brigham Young University, 1932, 1946; Ph.D., University of Minnesota, 1963.
- Coran L. Cluff** Assistant Professor of Chemistry (1960)
B.S., Arizona State University, 1952; M.S., Ph.D., University of Michigan, 1955, 1960.
- Lane A. Compton** Associate Professor of Physical Science Education (1953)
B.S., M.S., Ed.D., University of Utah, 1943, 1951, 1955.
- Rita Conrad** Special Instructor in Nursing (1963)
B.S., University of Alberta, 1960.
- Allan D. Cook** Instructor in Religious Instruction (1962)
A.A., Weber State College, 1949; B.A., M.A., Brigham Young University, 1954, 1958.
- Ivan L. Corbridge** Associate Professor of Economics (1952)
B.A., Utah State University, 1946; M.S., University of Chicago, 1948; Ph.D., Washington State College, 1952.
- *Stephen R. Covey** Assistant Professor of Business Management (1957)
B.S., University of Utah, 1953; M.B.A., Harvard Graduate School of Business Administration, 1957.
- Richard O. Cowan** Assistant Professor of History of Religion (1961)
B.A., Occidental College, 1958; M.A., Ph.D., Stanford University, 1959, 1961.
- Soren F. Cox** Assistant Professor of English (1955)
B.A., M.A., Brigham Young University, 1952, 1956.
- Richard H. Cracroft** Instructor in English (1963)
B.A., M.A., University of Utah, 1961, 1963.
- Marshall R. Craig** Assistant Professor of English (1953)
B.S., Brigham Young University, 1941; M.A., Columbia University, 1947.
- Lars G. Crandall** Associate Professor of Business Education (1944)
B.S., M.S., Brigham Young University, 1944, 1945; Ph.D., Colorado State College, 1960.

- *John K. Crnkovic** Associate Professor of Education (1956)
B.A., Willamette University, 1930; M.A., University of Michigan, 1940; Ed.D., Arizona State University, 1956.
- Earl C. Crockett** Acting President of the University;
Professor of Economics
B.S., University of Utah, 1927; Ph.D., University of California, 1931.
- Evan M. Croft** Associate Professor of Business Education (1936)
B.S., Brigham Young University, 1929; M.S., University of Southern California, 1940.
- Ivan A. Crosland** Special Instructor in Dramatic Arts (1963)
B.S., Brigham Young University, 1961.
- Bert P. Cundick** Associate Professor of Psychology (1962)
B.A., M.S., University of Utah, 1957, 1959; Ph.D., Ohio State University, 1962.
- Robert M. Cundick** Assistant Professor of Music (1957)
B.F.A., M.F.A., Ph.D., University of Utah, 1949, 1950, 1955.
- Brandt B. Curtis** Assistant Professor of Music (1955)
B.A., Brigham Young University, 1953; M.Mus., Indiana University, 1955.
- Virginia F. Cutler** Professor of Housing and Home Management;
Dean of the College of Family Living (1961)
B.S., University of Utah, 1926; M.A., Stanford University, 1937; Ph.D., Cornell University, 1946.
- Delva Daines** Associate Professor of Elementary Education (1955)
B.S., M.S., Utah State University, 1940, 1947; Ed.D., State College of Washington, 1956.
- *Robert H. Daines** Assistant Professor of Business Management (1959)
B.S., Utah State University, 1956; M.B.A., Stanford University, 1959.
- David J. Dalton** Instructor in Music (1963)
B.M., M.M., Eastman School of Music, 1959, 1961.
- Philip B. Daniels** Assistant Professor of Psychology (1961)
B.S., M.S., Brigham Young University, 1954, 1957; Ph.D., Harvard University, 1962.
- Alexander B. Darais** Assistant Professor of Art (1954)
B.S., Brigham Young University, 1948; M.F.A., Claremont Graduate School, 1952.
- Bertha Davidson** Clinical Instructor in Education (1950)
B.S., M.Ed., Brigham Young University, 1950, 1954.
- J. Kenneth Davies** Professor of Economics (1953)
B.S., Marquette University, 1945; M.S., Brigham Young University, 1950; Ph.D., University of Southern California, 1959.
- Edwin Dean** Associate Professor of Mathematics (1949)
B.S., M.S., Brigham Young University, 1947, 1952; M.S., University of Michigan, 1955.
- *Daniel Decker** Associate Professor of Physics (1958)
B.S., M.S., Brigham Young University, 1953, 1955; Ph.D., University of Illinois, 1958.
- Harry C. Dees** Instructor in Library Science (1959)
B.A., Brigham Young University, 1949; M.A., University of California, 1950.
- Benjamin F. DeHoyos** Instructor in Recreation (1961)
B.S., M.A., Brigham Young University, 1956, 1961.
- Gerrit de Jong, Jr.** Professor of Modern Languages; Dean Emeritus,
College of Fine Arts (1925)
B.A., M.A., University of Utah, 1920, 1925; Ph.D., Stanford University, 1933.
- Thelma de Jong** Clinical Instructor in Education (1957)
B.A., Southern Idaho College of Education, 1948; M.A., Brigham Young University, 1957.
- *Stanford D. DeMille** Instructor in Business Education (1957)
B.S., M.S., Brigham Young University, 1950, 1960.
- William Dibble** Assistant Professor of Physics (1961)
B.S., Ph.D., California Institute of Technology, 1954, 1960.

- Dwight R. Dixon** Associate Professor of Physics (1959)
B.S., Utah State University, 1942; Ph.D., University of California, 1955.
- Fred W. Dixon** Assistant Professor of Physical Education, (1928)
B.S., M.S., Brigham Young University, 1926, 1939.
- Mignon Domgaard** Instructor in Clothing and Textiles (1954)
B.S., Utah State University, 1943; M. of H.E., Oregon State College, 1954.
- David M. Donaldson** Professor of Bacteriology (1955)
B.S., M.S., Ph.D., University of Utah, 1950, 1952, 1954.
- Arthur A. Done** Assistant Professor of Business Management (1961)
B.S., M.B.A., University of Utah, 1955, 1956, Ph.D., University of Illinois, 1963.
- G. Byron Done** Professor of Scripture (1956)
B.A., University of Utah, 1928; M.A., Ph.D., University of Southern California, 1937, 1939.
- Lester N. Downing** Professor of Educational Psychology (1954)
B.S., M.S., Utah State University, 1947, 1949; Ed.D., Colorado State College of Education, 1951.
- Kathryn O. Doxey** Instructor in Clothing and Textiles (1961)
B.S., Brigham Young University, 1958; M.A., M.S., Oregon State College, 1961, 1962.
- Roy W. Doxey** Associate Professor of Scripture (1948)
B.A., M.A., George Washington University, 1938, 1940.
- Willard B. Doxey** Associate Professor of Economics (1956)
B.S., M.S., University of Utah, 1937, 1947; Ph.D., University of California (Berkeley), 1956.
- J. Duane Dudley** Associate Professor of Physics (1956)
B.S., Brigham Young University, 1952; M.A., Rice Institute, 1953; Ph.D., University of Utah, 1959.
- Claude B. Duerden** Assistant Professor of Health Education (1958)
B.S., University of Utah, 1950; M.P.H., University of California (Berkeley), 1954.
- James T. Duke** Assistant Professor of Sociology (1963)
B.A., M.A., University of Utah, 1957, 1958; Ph.D., University of California at Los Angeles, 1963.
- S. Olani Durrant** Special Instructor in Civil Engineering (1963)
B.E.S., M.S., Brigham Young University, 1962, 1963.
- William G. Dyer** Professor of Sociology (1955)
B.A., M.A., Brigham Young University, 1950, 1952; Ph.D., University of Wisconsin, 1955.
- *L. Brent Eagar** Instructor in Economics (1959)
B.S.E.E., University of Utah, 1957; M.B.A., University of Michigan, 1959.
- Don L. Earl** Professor of Music (1946)
B.A., M.A., Brigham Young University, 1940, 1947; Ph.D., Indiana University, 1952.
- E. John Eastmond** Professor of Physics (1951)
B.A., Brigham Young University, 1937; Ph.D., University of California (Berkeley), 1943.
- R. LaVell Edwards** Instructor in Athletics (1962)
B.S., Utah State University, 1952; M.S., University of Utah, 1960.
- Robert L. Egbert** Professor of Educational Psychology (1955)
B.S., M.S., Utah State University, 1947, 1948; Ph.D., Cornell University, 1949.
- Russell J. Egbert** Assistant Professor of Mathematics (1963)
B.A., University of California at Riverside, 1960; M.S., University of Arizona, 1961.
- Richard Grant Ellsworth** Associate Professor of English (1958)
B.A., M.A., Brigham Young University, 1951, 1952; Ph.D., University of Maryland, 1958.
- Glenn L. Enke** Professor of Civil Engineering (1962)
B.S., University of California, 1928.
- David L. Evans** Assistant Professor of English (1954)
B.A., Idaho State College, 1948; M.A., University of Utah, 1953.

- LeRoy G. Faerber** Assistant Professor of Business Management (1964)
B.S., M.B.S., University of Utah, 1958, 1959.
- Merwin Fairbanks** Instructor in Communications (Journalism);
Manager of Student Publications (1962)
B.A., Brigham Young University, 1941.
- Dean B. Farnsworth** Professor of English (1953)
B.A., M.A., University of Utah, 1946, 1947; Ph.D., University of California (Berkeley), 1950.
- Raymond B. Farnsworth** Professor of Agronomy (1946)
B.S., Brigham Young University, 1937; M.S., Massachusetts State College, 1938; Ph.D., Ohio State University, 1941.
- James E. Faulkner** Assistant Professor of Statistics (1963)
B.S., Utah State University, 1950; M.S., Kansas State University, 1952.
- Georgia Faux** Special Instructor in Dramatic Arts (1955)
A.B., Brigham Young University, 1944.
- *Lawrence Fearnley** Associate Professor of Mathematics (1957)
B.S., London University, 1953; Ph.D., University of Utah, 1959.
- Lottie L. Felkner** Assistant Professor of Nursing; Director of
Associate Degree Program (1963)
B.S., M.S., University of Utah, 1953, 1961.
- D. Allen Firmage** Professor of Engineering (1955)
B.S.C.E., University of Utah, 1940; M.S., Massachusetts Institute of Technology, 1941.
- Sherman K. Fitzgerald** Associate Professor of Sociology (1963)
B.S., M.S., Brigham Young University, 1948, 1951; Ph.D., Cornell University, 1952.
- Chad J. Flake** Instructor in Library Science (1953)
B.A., Brigham Young University, 1953; M.A., University of Denver, 1955.
- *Royce P. Flandro** Associate Professor of Secondary Education (1953)
B.S., M.S., University of Utah, 1948, 1950; Ed.D., University of Indiana, 1957.
- Marvin H. Folsom** Associate Professor of Languages (1961)
B.A., M.A., Brigham Young University, 1956, 1957; Ph.D., Cornell University, 1961.
- Rulon S. Francis** Instructor in Physical Education (1963)
B.S., Brigham Young University, 1952.
- *Joseph C. Free** Assistant Professor of Mechanical Engineering (1961)
B.E.S., Brigham Young University, 1958; M.S., California Institute of Technology, 1961.
- *Herbert H. Frost** Associate Professor of Zoology (1960)
B.A., M.A., Brigham Young University, 1941, 1947; Ph.D., Cornell University, 1955.
- Dean K. Fuhrman** Professor of Engineering (1954)
B.S., M.S., Utah State University, 1941, 1950; Ph.D., University of Wisconsin, 1952.
- LaVell C. Gamett** Assistant Professor of Industrial Arts (1946)
B.S., Brigham Young University, 1935; M.S., University of Oregon, 1951.
- Andrew L. Gardner** Associate Professor of Physics (1964)
B.S., Utah State University, 1940; Ph.D., University of California (Berkeley), 1955.
- John H. Gardner** Professor of Physics (1949)
B.S., Utah State University, 1943; M.A., Ph.D., Harvard University, 1947, 1950.
- Willard H. Gardner** Senior Systems Analyst of Computer Center;
Assistant Professor of Computer Science (1963)
B.S., Utah State University, 1948, M.S., Brigham Young University, 1956.
- Byron W. Gassman** Assistant Professor of English (1960)
B.A., Brigham Young University, 1955; M.A., Ph.D., University of Chicago, 1956, 1960.
- Crawford Gates** Professor of Music (1948)
B.A., San Jose State College, 1944; M.A., Brigham Young University, 1948; Ph.D., Eastman School of Music, University of Rochester, 1954.
- David D. Geddes** Professor of Physical Education and Health (1952)
B.S., M.S., Brigham Young University, 1950, 1952; Ph.D., University of Southern California, 1959.

- Marise Geddes** Assistant Professor of Nursing (1962)
B.S., M.S., Brigham Young University, 1952, 1962.
- Burton C. Gee** Assistant Professor of Mathematics (1960)
B.S., Brigham Young University, 1951; M.S., Oregon State College, 1958.
- O. Norman Geertsens** Assistant Professor of Physics (1941)
B.S., Brigham Young University, 1930; M. S. University of California at Los Angeles, 1951.
- Eileen Gibbons** Instructor in English (1959)
B.S., Utah State University, 1953; M.A., Brigham Young University, 1959.
- M. Carl Gibson** Associate Professor of Modern and Classical Languages (1949)
B.A., M.A., Brigham Young University, 1947, 1949; Ph.D., University of Oregon, 1960.
- Gurcharan S. Gill** Instructor in Mathematics (1960)
B.S., Brigham Young University, 1958; M.S., University of Utah, 1960.
- Preston R. Gledhill** Professor of Dramatic Arts (1947)
Degré Supérieur, La Sorbonne, 1938; B.A., Brigham Young University, 1939; M.A., Louisiana State University, 1940; Ph.D., University of Wisconsin, 1951.
- J. Rex Goates** Professor of Chemistry (1947)
B.S., Brigham Young University, 1942; Ph.D., University of Wisconsin, 1947.
- Max C. Golightly** Instructor in Dramatic Arts (1960)
B.A., M.A., Brigham Young University, 1950, 1959.
- A. Harold Goodman** Professor of Music (1960)
B.A., University of Arizona, 1947; M.A., Ed.D., University of Southern California, 1951, 1960.
- Reese J. Goodwin** Instructor in Civil Engineering (1963)
B.E.S., M.S., Brigham Young University, 1962, 1963.
- *Nan Osmond Grass** Assistant Professor of English (1951)
B.A., Brigham Young University, 1930; M.A., Stanford University, 1954.
- John Alden Green** Associate Professor of Languages (1964)
B.A., M.A., Brigham Young University, 1954, 1955; Ph.D., University of Washington, 1960.
- Alan H. Grey** Assistant Professor of Geography (1964)
B.A., Brigham Young University, 1959; M.S., Ph.D., University of Wisconsin, 1960, 1963.
- Dixie A. Grimmett** Instructor in Physical Education for Women (1963)
B.S., Brigham Young University, 1959; M.S., Washington State University, 1962.
- *Lue S. Groesbeck** Instructor in Music (1957)
B.A., Brigham Young University, 1948.
- Wells A. Grover** Assistant Professor of Accounting (1963)
B.S., Ricks College, 1954; M.S., Brigham Young University, 1959.
- Stewart L. Grow** Professor of History and Political Science;
Director, Institute of Government Service (1947)
B.S., M.S., Brigham Young University, 1935, 1948; Ph.D., University of Utah, 1954.
- *Clark J. Gubler** Professor of Chemistry (1958)
B.A., Brigham Young University, 1939; M.A., Utah State University, 1941; Ph.D., University of California, 1945; Established Investigator of the American Heart Association, 1960.
- Donworth Gubler** Instructor in Modern Languages (1954)
B.A., M.A., Brigham Young University, 1948, 1949.
- Richard L. Gunn** Professor of Art and Education (1948)
B.S., M.S., Brigham Young University, 1947, 1950; Ed.D., Stanford University, 1955; Banff School of Fine Arts.
- LeRoy R. Hafen** Professor of History (1954)
B.A., Brigham Young University, 1916; M.A., University of Utah, 1919; Ph.D., University of California, 1924; Litt.D., University of Colorado, 1935.
- William J. Hafen** Assistant Professor of Recreation (1954)
B.S., Brigham Young University, 1950; M.A., State College of Washington, 1953; D.R., Indiana University, 1960.

- Wayne B. Hales** Professor of Physics and Mathematics (1930)
B.A., Brigham Young University, 1916; M.A., University of Utah, 1922; Ph.D., California Institute of Technology, 1926.
- Blaine H. Hall** Special Instructor in English
B.S., Brigham Young University, 1960.
- S/Sgt. George M. Hall** Instructor in Air Science (1958)
- H. Tracy Hall** Professor of Chemistry; Director of the
B.S., M.S., Ph.D., University of Utah, 1942, 1943, 1948. Research Division (1955)
- John R. Halliday** Professor of Music (1936)
B.A., M.A., Brigham Young University, 1935, 1936; Ph.D., Eastman School of Music, University of Rochester, 1941.
- Lawson D. Hamblin** Assistant Professor of Library Science (1948)
B.A., Brigham Young University, 1938; LL.B., Washington College of Law, 1948.
- William K. Hamblin** Associate Professor of Geology (1963)
B.A., M.S., Brigham Young University, 1953, 1954; Ph.D., University of Michigan, 1958
- Richard W. Hanks** Assistant Professor of Chemical Engineering (1963)
B.E., Yale University, 1957; Ph.D., University of Utah, 1960.
- George H. Hansen** Professor of Geology and Geography (1927)
B.S., Utah State University, 1918; M.S., Ph.D., George Washington University, 1925, 1927.
- Harold I. Hansen** Professor of Dramatic Arts (1952)
B.S., Utah State University, 1937; M.A., Ph.D., State University of Iowa, 1940, 1949.
- Henry K. Hansen** Assistant Professor of Physics (1963)
B.S., M.S., Brigham Young University, 1957, 1959; Ph.D., University of California, 1963.
- Terrence L. Hansen** Professor of Languages (1960)
B.A., University of Utah, 1946; M.A., Ph.D., Stanford University, 1948, 1950.
- Blaine C. Hardy** Assistant Professor of Educational Philosophy (1961)
B.A., Washington State University, 1957; M.A., Brigham Young University, 1959; Ph.D., Wayne State University, 1963.
- Kenneth R. Hardy** Professor of Psychology (1954)
B.A., M.A., University of Utah, 1948, 1949; Ph.D., University of Michigan, 1954.
- Richard J. Hardy** Instructor in Health Education (1963)
B.S., University of Utah, 1958; M.A., Columbia University, 1959.
- Frank W. Harmon** Assistant Professor of Elementary Education (1963)
B.S., M.S., University of Utah, 1952, 1956.
- Callis R. Harms** Assistant Professor of Educational Administration (1960)
B.S., M.Ed., Brigham Young University, 1952, 1956; Ed.D., Arizona State University, 1961.
- James M. Harris** Associate Professor of Educational Psychology (1955)
B.S., M.S., Utah State University, 1952, 1953; Ph.D., Cornell University, 1955.
- John B. Harris** Assistant Professor of English (1958)
B.A., M.A., Brigham Young University, 1955, 1956.
- John S. Harris** Assistant Professor of English (1962)
B.A., M.A., Brigham Young University, 1953, 1958.
- Bertrand F. Harrison** Professor of Botany (1929)
B.S., M.S., Brigham Young University, 1930, 1931; Ph.D., University of Chicago, 1937.
- Betty D. Harrison** Assistant Professor of Educational Psychology (1961)
B.S., M.S., Brigham Young University, 1959, 1960.
- Charles J. Hart** Professor of Recreation and of Physical and
Health Education (1925)
B.S., Utah State University, 1922; M.A., Ed.D., New York University, 1932, 1945.
- David K. Hart** Instructor in Political Science (1960)
B.S., Brigham Young University, 1957; M.A., University of California at Berkeley, 1960.

- Edward L. Hart** Professor of English (1952)
B.S., University of Utah, 1939; M.A., University of Michigan, 1941; Ph.D., Oxford University (England), 1950.
- Milton F. Hartvigen** Professor of Physical Education; Dean of the College of Physical Education (1956)
B.S., M.Ed., Utah State University, 1930, 1939; Ed.D., University of California at Los Angeles, 1956.
- Captain Loyal D. Hastings** Assistant Professor of Air Science (1963)
B.S., Brigham Young University, 1955.
- Floyd E. Haupt** Assistant Professor of Mathematics (1954)
B.S., M.S., University of Arizona, 1947, 1948.
- Nena Rey Hawkes** Special Instructor in Physical Education for Women (1961)
B.S., Utah State University, 1954.
- Richard T. Hawkins** Associate Professor of Chemistry (1959)
B.A., Brigham Young University, 1951; Ph.D., University of Illinois, 1959.
- Darwin L. Hayes** Special Instructor in English (1961)
B.A., M.A., Brigham Young University, 1957, 1963.
- C. Lynn Hayward** Professor of Zoology (1930)
B.S., M.S., Brigham Young University, 1927, 1931; Ph.D., University of Illinois, 1941.
- Alma Heaton** Assistant Professor of Recreation Education (1953)
B.S., M.S., Utah State University, 1950, 1951.
- Howard S. Heaton** Assistant Professor of Mechanical Engineering (1963)
B.S., University of Southern California, 1957; M.S., Ph.D., Stanford University, 1959, 1963.
- Israel C. Heaton** Professor of Recreation Education (1956)
B.S., M.S., Utah State University, 1940, 1941; Re.D., University of Indiana, 1955.
- Charles A. Henson** Instructor in Dramatic Arts (1958)
B.S., M.S., Brigham Young University, 1957, 1959.
- *Richard H. Henstrom** Instructor in Speech (1957)
B.F.A., M.F.A., University of Utah, 1949, 1953.
- Karl P. Herde, Jr.** Instructor in Business Education (1957)
B.S., M.S., Brigham Young University, 1949, 1956.
- *Wilford M. Hess** Assistant Professor of Botany (1962)
B.S., Brigham Young University, 1957; M.S., Ph.D., Oregon State University, 1960, 1962.
- *Jean-Pierre Heudier** Instructor in Languages (1960)
B.A., Montana State University, 1957; M.A., Brigham Young University, 1960.
- *Dustin H. Heuston** Instructor in English (1959)
B.A., Hamilton College, 1954; M.A., Stanford University, 1959.
- *John C. Higgins** Instructor in Mathematics (1961)
B.A., M.A., Brigham Young University, 1958, 1960.
- Armin J. Hill** Professor of Physics; Dean of the College of Physical and Engineering Sciences (1957)
B.S., M.S., Montana State College, 1932, 1938; M.S., Ph.D., California Institute of Technology, 1949, 1950.
- L. Douglas Hill** Instructor in English (1959)
B.S., Brigham Young University, 1954.
- *Max W. Hill** Associate Professor of Physics (1958)
B.A., Brigham Young University, 1954; Ph.D., University of California, 1959.
- Kenneth L. Hillam** Associate Professor of Mathematics (1957)
B.S., M.S., University of Utah, 1949, 1956; Ph.D., University of Colorado, 1962.
- Ray C. Hillam** Assistant Professor of Political Science (1960)
B.A., University of Utah, 1955; M.A., George Washington University, 1958.
- Horace G. Hilton** Assistant Professor of Statistics (1962)
B.S., Brigham Young University, 1957; M.S., Ph.D., North Carolina State College, 1960, 1962.

- Lynn M. Hilton** Associate Professor of Education (1953)
B.S., M.S., University of Utah, 1950; Ph.D., University of Chicago, 1952.
- Edwin C. Hinckley** Associate Professor of Industrial Education (1963)
B.S., M.S., Oregon State University, 1950, 1956; Ed.D., Colorado State College, 1963.
- Lehi F. Hintze** Professor of Geology (1955)
B.A., University of Utah, 1941; M.A., Ph.D., Columbia University, 1949, 1951.
- Leona Holbrook** Professor of Physical Education (1937)
B.S., University of Utah, 1929; M.A., Ed.D., Columbia University, 1935, 1950.
- Ivin L. Holt** Assistant Professor of Electronics (1963)
B.S., Brigham Young University, 1957; M.Ed., Pennsylvania State University, 1958.
- Shirl J. Hone** Instructor in Mathematics (1959)
B.S., Utah State University, 1949; M.S., Northwestern University, 1952.
- Keith H. Hoopes** Associate Professor of Animal Science (1957)
B.S., Utah State University, 1957; D.V.M., State College of Washington, 1956.
- *Russell N. Horiuchi** Instructor in Geography (1961)
B.A., Brigham Young University, 1943; M.A., University of California, 1958.
- A. Burt Horsley** Associate Professor of Philosophy and Religion (1956)
B.A., M.A., Brigham Young University, 1945, 1954; Dd.P., Münster University, 1955;
Ph.D., Westphalian Welhelms Universität, Münster, Germany, 1956.
- Frank Horton** Instructor in English (1955)
B.A., Brigham Young University, 1951; M.A., University of Southern California, 1957.
- Marvin D. Horton** Assistant Professor of Chemical Engineering (1963)
B.S., Ph.D., University of Utah, 1957, 1961.
- William A. Hoskisson** Assistant Professor of Bacteriology (1957)
B.S., M.S., Utah State University, 1938, 1941; Ph.D., University of Illinois, 1944.
- Alice E. Howe** Instructor in English (1959)
B.A., M.A., Brigham Young University, 1958, 1961.
- Robert J. Howell** Professor of Psychology (1952)
B.A., M.A., Ph.D., University of Utah, 1948, 1949, 1951.
- Ernest D. Hubbard** Assistant Professor of Accounting (1963)
B.S., Utah State University, 1952; M.B.A., University of Utah, 1959.
- Thomas J. Hudspeth** Instructor in Physical Education;
Head Football Coach (1964)
B.A., University of Tulsa, 1953.
- Patricia K. Huff** Instructor in Housing and Home Management (1963)
B.S., M.S., Brigham Young University, 1961, 1963.
- Darcus D. Hyde** Instructor in English (1957)
B.A., Brigham Young University, 1956.
- Paul V. Hyer** Associate Professor of History (1957)
B.A., Brigham Young University, 1951; M.A., Ph.D., University of California, 1953,
1960.
- *Scott S. Hymas** Instructor in English (1958)
B.A., Brigham Young University, 1955; M.A., Western Reserve University, 1958.
- Reed M. Izatt** Associate Professor of Chemistry (1956)
B.S., Utah State University, 1951; Ph.D., Pennsylvania State University, 1954.
- Ramona M. Jacob** Clinical Instructor in Education (1962)
B.A., Brigham Young University, 1942.
- *Briant S. Jacobs** Professor of English (1946)
B.A., Brigham Young University, 1939; Ph.D., State University of Iowa, 1944.
- M. Alberta Jacobs** Special Instructor in Languages (1962)
B.A., Brigham Young University, 1959.
- Phyllis C. Jacobson** Assistant Professor of Physical Education for
Women (1957)
B.S., M.S., Utah State University, 1953, 1954.

- M. Wells Jakeman** Professor of Archaeology (1946)
B.A., University of Utah, 1931; M.A., University of Southern California, 1932; Ph.D., University of California, 1938.
- Sherald W. James** Special Instructor in Health Education (1962)
B.S., M.S., Brigham Young University, 1956, 1962.
- Ronald D. Jamison** Assistant Professor of Mathematics (1963)
B.S., Brigham Young University, 1957.
- August W. Jaussi** Assistant Professor of Zoology (1962)
B.S., University of Idaho, 1953; M.S., Brigham Young University, 1955; Ph.D., Oklahoma State University, 1960.
- Ronda H. Jenkins** Instructor in Industrial Education (1964)
B.S., Brigham Young University, 1955
- Allene Jensen** Instructor in Library Science (1961)
B.A., M.S., University of Utah, 1930, 1957.
- Bruce A. Jensen** Special Instructor in Languages (1963)
B.A., Brigham Young University, 1962.
- *De Lamar Jensen** Associate Professor of History (1957)
B.A., Brigham Young University, 1952; M.A., Ph.D., Columbia University, 1953, 1957.
- Don C. Jensen** Instructor in Languages (1963)
B.A., M.A., Brigham Young University, 1960, 1963.
- James A. Jensen** Curator of Geology (1961)
- Mary B. Jensen** Instructor in Physical Education and Recreation (1953)
B.A., Park College of Missouri, 1939; M.A., Brigham Young University, 1963.
- Vern H. Jensen** Associate Professor of Personnel Guidance (1949)
B.S., M.S., Brigham Young University, 1948, 1950; Ed.D., University of Colorado, 1957.
- Gloria D. Jensen** Instructor in Library Science (1954)
B.S., Brigham Young University, 1950; M.S., Columbia University, 1954.
- Ernest C. Jeppsen** Professor of Industrial Education; Dean of General College; Coordinator, Industrial and Technical Education (1959)
B.S., Utah State University, 1926; M.S., Colorado State University, 1938.
- J. Lorin Jex** Assistant Professor of Speech (1949)
B.A., M.A., Brigham Young University, 1947, 1950.
- Franz M. Johansen** Assistant Professor of Art (1956)
B.A., M.A., Brigham Young University, 1955, 1960; Illinois Institute of Technology, California School of Arts and Crafts, Academie de la Grand Chaumiere.
- Eldred A. Johnson** Associate Professor of Accounting (1955)
B.A., M.A., Brigham Young University, 1949, 1950; C.P.A., California, 1952.
- Lynn E. Johnson** Assistant Professor of Psychology; Counselor in Counseling Service (1961)
B.A., Brigham Young University, 1958; M.A., Ph.D., University of Utah, 1959, 1962.
- J. Richard Jones** Instructor in Physical Education for Men (1961)
B.S., M.S., Brigham Young University, 1951, 1955.
- Jens J. Jonsson** Professor of Electrical Engineering (1953)
B.S.G.E., B.S.E.E., University of Utah, 1944, 1946; M.S.E.E., Ph.D., Purdue University, 1947, 1951.
- Clive D. Jorgensen** Instructor in Zoology (1963)
B.S., M.S., Ph.D., Brigham Young University, 1954, 1957, 1963.
- Eleanor Jorgensen** Assistant Professor of Clothing and Textiles (1949)
B.S., Brigham Young University, 1946; M.S., Kansas State College, 1954.
- Joseph J. Keeler** Assistant Professor of Music; University Organist (1935)
B.S., M.A., Brigham Young University, 1940, 1950.
- Hans-Wilhelm Kelling** Assistant Professor of Languages (1962)
B.A., Brigham Young University, 1958; M.A., Stanford University, 1960.
- Burton C. Kelly** Assistant Professor of Education; Counselor in Counseling Service (1962)
B.S., Idaho State College, 1952; M.S., Brigham Young University, 1955.

- C. Rodney Kimball** Instructor in Physical Education and Health (1937)
B.S., M.S., Brigham Young University, 1955, 1963.
- Edwin R. Kimball** Professor of Physical Education (1935)
B.S., Brigham Young University, 1926; M.S., University of Southern California, 1935; Ed.D., University of Oregon, 1955.
- Alma W. King** Assistant Professor of Religion (1956)
B.S., M.S., Brigham Young University, 1930, 1936.
- Hugh Kirkendall** Instructor in Library Science (1961)
B.S., Brigham Young University, 1959; M.L.S., University of Washington, 1963.
- Hattie M. Knight** Assistant Professor of Library Science (1941)
B.S., Brigham Young University, 1941; B.S., in L.S., University of Denver, 1943; M.S., in L.S., George Peabody College for Teachers, 1951.
- Elmer M. Knowles** Professor of Family Life Education (1962)
B.S., M.S., Utah State University, 1949, 1950; Ph.D., Cornell University, 1952.
- William R. Lambert** Instructor in Business Management (1962)
B.S., University of Utah, 1953; M.B.A., Harvard Graduate School, 1962.
- Merle E. Lamson** Instructor in Library Science (1961)
B.S., Brigham Young University, 1955; M.S., Columbia University, 1960.
- A. Dean Larsen** Instructor in Library Science (1956)
B.S., Brigham Young University, 1954; M.A., University of Michigan, 1960.
- Don H. Larsen** Professor of Bacteriology (1952)
B.S., Brigham Young University, 1940; M.A., University of Nebraska, 1942; Ph.D., University of Utah, 1950.
- Jean Larsen** Instructor in Family Life Education (1960)
B.S., M.S., Brigham Young University, 1953, 1960.
- *Kenneth M. Larsen** Assistant Professor of Mathematics (1960)
B.A., University of Utah, 1950; M.A., Brigham Young University, 1956.
- Vernon W. Larsen** Associate Professor of Sociology (1962)
B.A., M.A., Brigham Young University, 1949, 1950; Ph.D., Cornell University, 1957.
- Clinton F. Larson** Professor of English (1947)
B.A., M.A., University of Utah, 1943, 1947; Ph.D., University of Denver, 1956.
- Everett Gerald Larson** Assistant Professor of Physics (1964)
B.S., M.S., Massachusetts Institute of Technology, 1957, 1959.
- Gustave O. Larson** Associate Professor of History of Religion (1954)
B.A., M.A., University of Utah, 1920, 1926.
- Duane M. Laws** Assistant Professor of Family Life Education (1963)
B.A., M.A., Brigham Young University, 1958, 1959.
- W. Derby Laws** Professor of Agronomy (1960)
B.A., Brigham Young University, 1939; M.S., Utah State University, 1941; Ph.D., Ohio State University, 1944.
- Harold R. Laycock** Associate Professor of Music (1949)
B.A., M.A., Brigham Young University, 1937, 1947; D.M.A., University of Southern California, 1960.
- Ralph G. Laycock** Associate Professor of Music (1953)
B.A., Brigham Young University, 1941; M.S., Juilliard School of Music, N.Y.C., 1948.
- Robert L. Layton** Associate Professor of Geography (1954)
B.S., M.S., University of Utah, 1951, 1952; Ph.D., University of Syracuse, 1962.
- Evelyn M. Lee** Assistant Professor of Homemaking Education (1962)
B.S., M.S., Montana State College, 1952, 1959.
- Harold W. Lee** Professor of Modern Languages (1937)
B.A., M.A., Brigham Young University, 1938, 1940; Ph.D., Stanford University, 1946.
- Stella Dixon Lewis** Special Instructor in Housing and Home Management (1956)
B.S., Brigham Young University, 1938.

- Elizabeth L. Liechty** Assistant Professor of Clothing and Textiles and Housing and Design (1952)
B.S., Utah State University, 1948; M.S., University of California at Los Angeles, 1954.
- LeRoy Lindeman** Assistant Professor of Communications (Audio-Visual) (1959)
B.S., M.S., University of Utah, 1951, 1957.
- Earl L. Lindley** Instructor in Physical Education for Men (1961)
B.S., M.S., Utah State University, 1954, 1957.
- Wesley P. Lloyd** Professor of Personnel and Guidance; Dean of Graduate School (1935)
B.S., M.S., Brigham Young University, 1927, 1934; Ph.D., University of Chicago, 1937.
- Lester Long** Special Instructor in Industrial Education (1959)
B.S., Brigham Young University, 1958.
- Ellen Loosli** Special Instructor in Family Life Education (1963)
B.S., Brigham Young University, 1961.
- Austin G. Loveless** Professor of Industrial Education (1963)
B.S., Utah State University, 1947; M.S., Oregon State University, 1952; Ed.D., University of Missouri, 1962.
- Warren F. Luch** Special Instructor in Art (1963)
Diploma, Philadelphia Museum College of Art, 1957; B.A., Brigham Young University, 1961.
- Daniel H. Ludlow** Professor of Scripture (1955)
B.S., Utah State University, 1946; M.S., Indiana University, 1953; Ed.D., Columbia University, 1955.
- Peter Lysenko** Instructor in Languages (1963)
B.S., Brigham Young University, 1958; M.A., Indiana University, 1963.
- LeRay L. McAllister** Assistant Professor of Accounting (1963)
B.A., Brigham Young University, 1957; M.S., Arizona State University, 1960.
- Ross "J" McArthur** Professor of Industrial Arts (1956)
B.S., M.S., Utah State University, 1949, 1953; Ed.D., University of Missouri, 1955.
- Lt. Col. Donald E. McCulloch** Assistant Professor of Air Science (1960)
B.S., Columbia University, 1957.
- *Quinn G. McKay** Associate Professor of Business Management (1960)
B.S., Brigham Young University, 1956; M.B.A., D.B.A., Harvard University, 1956, 1960.
- John E. McKendrick** Assistant Professor of English (1953)
B.A., M.A., University of Utah, 1942, 1949.
- Lynn A. McKinlay** Assistant Professor of Communications (Radio-Television) (1955)
Certificate, Post Graduate Certificate, Pasadena Community Playhouse, College of Theatre Arts, 1936, 1937.
- Max E. McKinnon** Assistant Professor of Industrial Arts (1957)
B.S., M.S., Utah State University, 1949, 1954.
- Kent H. McKnight** Professor of Botany (1947)
B.S., M.S., Brigham Young University, 1948, 1952; Ph.D., University of Michigan, 1955.
- Maughan W. McMurdie** Special Instructor in Music (1959)
B.S., Utah State University, 1954.
- Delbert H. McNamara** Professor of Physics (1955)
B.S., Ph.D., University of California (Berkeley), 1947, 1950.
- *C. Craig McNeil** Instructor in English (1959)
B.S., M.A., Brigham Young University, 1955, 1960.
- Melvin P. Mabey** Associate Professor of History and Political Science (1955)
B.S., M.A., Brigham Young University, 1947, 1953; D. Phil., Oxford University (England), 1955.

- Ruth M. Mackay** Instructor in English (1962)
B.A., M.A., Brigham Young University, 1960, 1962.
- *Harold S. Madsen** Instructor in English (1956)
B.A., M.A., University of Utah, 1953, 1960.
- *Truman G. Madsen** Associate Professor of Philosophy (1957)
B.S., M.S., University of Utah, 1951, 1952; A.M., Ph.D., Harvard University, 1957, 1960.
- Francis R. Magleby** Assistant Professor of Art (1959)
B.S., M.S., Brigham Young University, 1950, 1951; Art Students League.
- *Garth L. Mangum** Associate Professor of Economics (1960)
B.S., Brigham Young University, 1956; M.P.A., Ph.D., Harvard University, 1958, 1960.
- John H. Mangum** Assistant Professor of Chemistry (1963)
B.S., M.S., Brigham Young University, 1957, 1959; Ph.D., University of Washington, 1963.
- Robert P. Manookin** Instructor in Library Science (1959)
B.A., Brigham Young University, 1955; M.Mus., University of Illinois, 1959.
- James Mason** Instructor in Music (1962)
B.A., M.A., Brigham Young University, 1955, 1957.
- Conan E. Mathews** Professor of Art; Dean of the College of Fine Arts and Communications (1956)
B.A., College of Idaho, 1936; M.F.A., University of Utah, 1950; California School of Fine Arts, Columbia University.
- J. Keith Melville** Associate Professor of Political Science (1957)
B.A., University of Utah, 1947; M.A., University of California, 1949; Ph.D., University of Utah, 1956.
- Judith L. Merrell** Instructor in English (1963)
B.A., M.A., Brigham Young University, 1962, 1963.
- Keith H. Meservy** Instructor in Religious Instruction (1958)
B.A., Brigham Young University, 1951.
- Charles L. Metten** Associate Professor of Dramatic Arts (1962)
B.A., M.A., University of California at Los Angeles, 1951, 1952; Ph.D., State University of Iowa, 1960.
- Elaine Michaelis** Instructor in Physical Education (1960)
B.S., M.S., Brigham Young University, 1960, 1962.
- Louis Midgley** Assistant Professor of Political Science (1963)
B.S., M.S., University of Utah, 1954, 1957.
- Seymour Mikkelsen** Instructor in Animal Science; Manager, Dairy Farm (1956)
B.S., Brigham Young University, 1948.
- Elva Miller** Clinical Instructor in Education (1955)
B.S., Brigham Young University, 1947.
- Martin L. Miller** Assistant Professor of Physics and Mathematics (1942)
B.A., M.A., Brigham Young University, 1942, 1950.
- Floyd Millet** Assistant Professor of Physical Education; Director of Athletics (1964)
B.A., Brigham Young University, 1934; M.S., University of Southern California, 1939.
- Marion T. Millett** Assistant Professor of Geography (1958)
B.A., University of Southern California, 1954; M.A., University of Colorado, 1956.
- Harold W. Milner** Instructor in Business Management (1962)
B.S., University of Utah, 1960; M.A., Harvard Business School, 1962.
- *Gayle F. Miner** Assistant Professor of Electrical Engineering (1960)
B.S., M.S., University of Utah, 1959, 1960.
- Roland T. Minson** Special Instructor in Physical Education (1962)
B.S., Brigham Young University, 1951.
- Albert O. Mitchell** Professor of Dramatic Arts (1956)
B.S., M.S., University of Utah, 1933, 1935; Ph.D., University of Wisconsin, 1938.

- Olive K. B. Mitchell** Assistant Professor of English (1947)
B.A., University of Arizona, 1932; M.A., Brigham Young University, 1934.
- Rudy Moe** Instructor in Physical Education (1959)
B.A., Concordia College, Moorhead, Minnesota, 1953; M.S., Brigham Young University, 1962.
- J. C. Moffitt** Professor of Educational Administration and Special Consultant
to the Department of Graduate Education (1953)
B.S., M.S., Brigham Young University, 1926, 1929; Ph.D., University of Chicago, 1940.
- J. Weldon Moffitt** Professor of Psychology
B.S., Brigham Young University, 1949; M.S., University of Utah, 1950; Ph.D., University of Illinois, 1953.
- Darrel J. Monson** Associate Professor of Electrical Engineering (1956)
B.S., University of Utah, 1943; M.S., University of California (Berkeley), 1952
- Harold K. Moon** Assistant Professor of Languages (1963)
B.A., M.A., Brigham Young University, 1957, 1959; Ph.D., Syracuse University, 1963.
- Glen Moore** Associate Professor of Botany (1958)
B.S., M.S., Brigham Young University, 1949, 1950; Ph.D., University of Chicago, 1953.
- *Hal G. Moore** Assistant Professor of Mathematics (1961)
B.S., M.S., University of Utah, 1952, 1957.
- *Alonzo J. Morley** Professor of Speech (1928)
B.A., M.A., Brigham Young University, 1925, 1931; Ph.D., University of Iowa, 1935.
- Edwin B. Morrell** Assistant Professor of Political Science (1961)
B.A., Brigham Young University, 1956; M.A., Harvard University, 1959.
- Jeannette Morrell** Assistant Professor of English (1956)
B.A., M.A., University of Utah, 1933, 1935.
- *A. Reed Morrill** Professor of Educational Administration (1948)
B.S., M.S., Brigham Young University, 1928, 1937; Ed.D., University of Oregon, 1948.
- Lawrence Morris** Professor of Animal Science (1952)
B.S.A., University of Arizona, 1925; M.S., Texas A. & M., 1928; Ph.D., Louisiana State University, 1938.
- Sadie O. Morris** Professor of Food and Nutrition (1957)
B.S., M.S., Utah State University, 1921, 1922; Ph.D., Columbia University, 1933.
- Linnea Morrison** Assistant Professor of Nursing (1961)
B.S., Gustavus Adolphus, 1956; M.A., Columbia Teachers College, 1957.
- *Darrell Moses** Assistant Professor of Educational Psychology (1959)
B.A., M.A., University of Utah, 1952, 1953; Ph.D., University of Southern California, 1960.
- J. Joel Moss** Professor of Family Life Education (1961)
B.S., M.S., Brigham Young University, 1948, 1949; Ph.D., North Carolina University, 1954.
- J. Richard Murdock** Associate Professor of Botany (1952)
B.S., M.S., Brigham Young University, 1949, 1951; Ph.D., State College of Washington, 1957.
- Joseph R. Murphy** Associate Professor of Zoology (1960)
B.A., M.A., Brigham Young University, 1941, 1947; Ph.D., University of Nebraska, 1957.
- Merlin Myers** Assistant Professor of Anthropology (1963)
B.A., Brigham Young University, 1951; Ph.D., University of Cambridge, 1963.
- Keith L. Naegle** Special Instructor in Industrial Education (1961)
B.S., Utah State University, 1954.
- Jay Naylor** Instructor in Recreation Education (1961)
B.S., M.S., Brigham Young University, 1958, 1959.
- Donald K. Nelson** Assistant Professor of Library Science; Assistant Librarian (1961)
B.S., Utah State University, 1938; M.B.A., University of Denver, 1949.

- Glen T. Nelson** Professor of Economics (1954)
B.S., M.S., Utah State University, 1942, 1948; Ph.D., University of Illinois, 1950.
- H. Mark Nelson** Associate Professor of Physics (1959)
B.S., M.S., Brigham Young University, 1953, 1954; Ph.D., Harvard University, 1959.
- K. LeRoy Nelson** Professor of Chemistry (1956)
B.S., Utah State University, 1948; Ph.D., Purdue University, 1952.
- Hugh W. Nibley** Professor of History and Religion (1946)
B.A., University of California at Los Angeles, 1934; Ph.D., University of California, 1938.
- Reid N. Nibley** Assistant Professor of Music (1961)
B.F.A., M.A., University of Utah, 1950, 1953.
- Henry J. Nicholes** Professor of Health Education (1946)
B.A., Brigham Young University, 1935; M.S., Ph.D., University of Wisconsin, 1939, 1941.
- T/Sgt. Afton Nickell** Special Instructor in Air Science (1960)
- *Fred K. Nielsen** Instructor in Religious Instruction (1956)
B.A., M.A., Harvard University, 1954, 1955.
- Eve Nielson** Instructor in Library Science (1949)
B.S., Utah State University, 1945; M.S., University of Southern California, 1959.
- Howard C. Nielson** Professor of Statistics (1957)
B.S., University of Utah, 1947; M.S., University of Oregon, 1949; M.B.A., Ph.D., Stanford University, 1956, 1957.
- Lorna R. Nielson** Instructor in English (1961)
B.A., M.A., Brigham Young University, 1956, 1962.
- Major Kenneth J. Nix** Assistant Professor of Air Science (1961)
B.S., University of Utah, 1949.
- John D. Nixon** Instructor in Library Science (1961)
B.S., Brigham Young University, 1957; M.A., University of Denver, 1961.
- Quentin R. Nordgren** Associate Professor of Music (1955)
B.A., M.A., Brigham Young University, 1942, 1950; Ph.D., Indiana University, 1955.
- Keith R. Oakes** Professor of Educational Administration;
Director of Summer School (1957)
B.S., M.S., Utah State University, 1940, 1948; Ed.D., University of Southern California, 1954.
- Carol Oaks** Instructor in Library Science (1962)
B.A., Brigham Young University, 1943; M.A., University of Chicago, 1946.
- Clinton L. Oaks** Professor of Business Management (1957)
B.A., Brigham Young University, 1948; M.B.A., Ph.D., Stanford University, 1950, 1955.
- Doreen G. Okelberry** Special Instructor in Nursing (1963)
B.S., University of Utah, 1959.
- Robert T. Oliphant** Special Instructor in Physical Education (1963)
B.S., Brigham Young University, 1962.
- J. Lloyd Olpin** Associate Professor of Mathematics (1955)
B.S., Brigham Young University, 1925; M.S., Colorado University, 1938.
- Ernest L. Olson** Assistant Professor of English (1953)
B.A., M.A., University of Utah, 1948, 1949.
- *John E. Ord** Associate Professor of Elementary Education (1957)
B.S., Utah State University, 1940; M.S., University of Utah, 1949; Ed.D., Stanford University, 1958.
- Scott G. Orrock** Instructor in Family Life Education (1953)
B.A., M.A., Brigham Young University, 1952, 1953.
- Bryce B. Orton** Associate Professor of Accounting (1961)
B.S., M.B.A., University of Oregon, 1951, 1957; D.B.A., University of Washington, 1962.

- James B. Ott** Associate Professor of Chemistry (1960)
B.S., M.S., Brigham Young University, 1955, 1956; Ph.D., University of California, 1959.
- Glen F. Ovard** Associate Professor of Educational Administration (1958)
B.S., M.S., Brigham Young University 1949, 1954; Ed.D., Stanford University, 1958.
- Ronald T. Pace** Instructor in Animal Science (1961)
B.S., M.S., Brigham Young University, 1955, 1958.
- Thane J. Packer** Associate Professor of Youth Leadership (1959)
B.S., Utah State University, 1939; M.S., Brigham Young University, 1963.
- Spencer J. Palmer** Assistant Professor of History and Religious Instruction (1962)
B.A., M.A., Brigham Young University, 1952, 1959.
- Boyd L. Park** Assistant Professor of Accounting (1963)
B.S., Brigham Young University, 1954; L.L.B., University of Utah, 1957.
- Karen F. Parker** Instructor in English (1961)
B.S., M.A., Brigham Young University, 1956, 1962.
- JoAnn Parry** Instructor in Physical Education for Women (1961)
B.S., University of Utah, 1960; M.S., Washington State University, 1961.
- Robert C. Patch** Assistant Professor of Religious Instruction (1959)
B.A., University of New Mexico, 1945; M.Th., Brigham Young University, 1949.
- I. Reed Payne** Student Counselor and Assistant Professor of Psychology (1964)
B.S., Brigham Young University, 1956; M.S., Ph.D., Pennsylvania State University, 1958, 1963.
- John W. Payne** Assistant Professor of Sociology (1947)
B.A., M.A., Brigham Young University, 1936, 1948.
- Wayne E. Pearce** Instructor of Business Management; Tennis Coach (1963)
B.S., M.B.A., University of Utah, 1960, 1961.
- Glenn L. Pearson** Associate Professor of Religious Instruction (1951)
B.S., Utah State University, 1949; M.A., Brigham Young University, 1951.
- Darhl M. Pedersen** Assistant Professor of Psychology (1962)
B.S., M.S., Brigham Young University, 1957, 1958; Ph.D., University of Illinois, 1962.
- Charles M. Percival** Instructor in Mechanical Engineering (1962)
B.E.S., M.S., Brigham Young University, 1960, 1961.
- Devern J. Perry** Instructor in Business Education (1963)
B.S., M.S., Brigham Young University, 1958, 1962.
- Betty J. Petersen** Instructor in Business Education (1963)
B.S., Utah State University, 1950; M.A., Teachers College, Columbia University, 1960.
- Bonnie M. Peterson** Instructor in Family Life Education; Counselor in Counseling Service
B.A., Brigham Young University, 1948; M.S.W., University of Utah, 1954.
- *Dean A. Peterson** Professor of Business Education (1942)
B.S., Brigham Young University, 1938; M.S., Ed.D., University of Southern California, 1942, 1959.
- Evan T. Peterson** Associate Professor of Sociology (1959)
B.S., M.S., Brigham Young University, 1952, 1953; Ph.D., University of Michigan, 1959.
- Boyd G. Pett** Assistant Professor of Technical Institute (1961)
B.S., M.S., Utah State University, 1954, 1961.
- William Revell Phillips** Associate Professor of Geology (1957)
B.S., M.S., Ph.D., University of Utah, 1950, 1951, 1954.
- *Leonid S. Polevoy** Instructor in Languages (1960)
B.A., M.A., Harvard University, 1948, 1950.
- Richard D. Poll** Professor of History and Political Science (1948)
B.A., M.A., Texas Christian University, 1938, 1939; Ph.D., University of California, (Berkeley), 1948.

- J. Perry Polson** Associate Professor of Business Education (1952)
B.S., M.S., University of Utah, 1947, 1952; Ph.D., University of Southern California, 1961.
- Bill J. Pope** Professor of Chemical Engineering (1962)
B.S., University of Utah, 1947; M.S., Ph.D., University of Washington, 1948, 1959.
- *Blaine R. Porter** Professor of Family Life Education (1955)
B.S., M.A., Brigham Young University, 1947, 1949; Ph.D., Cornell University, 1952.
- Norma Potter** Assistant Professor of Nursing (1953)
Diploma, Latter-day Saints Hospital, Salt Lake City, 1931; B.S., University of Utah, 1950; M.N., University of Washington, 1961.
- Jenniev J. Poulson** Assistant Professor of Housing and Home Management (1963)
B.S., Brigham Young University, 1933; M.S., Iowa State University, 1954.
- Virginia B. Poulson** Assistant Professor of Homemaking Education (1950)
B.S., Brigham Young University, 1931; M.Ed., Colorado A. & M., 1955.
- Victor W. Purdy** Assistant Professor of Library Science (1954)
B.S., Brigham Young University, 1952; M.S., Columbia University, 1957.
- *Ellis T. Rasmussen** Assistant Professor of Religious Instruction (1951)
B.S., M.A., Brigham Young University, 1942, 1951.
- Edwin A. Read** Director of Laboratory Schools; Professor of Education (1959)
B.Ed., M.Ed., University of Alberta, 1948, 1949; Ed.D., University of Oregon, 1956.
- Susan E. Ream** Instructor in English (1961)
B.A., Brigham Young University, 1953; M.A., Columbia Teachers College, 1958.
- Jesse W. Reeder** Professor of History and Political Science (1952)
B.S., M.S., Utah State University, 1934, 1937; Ph.D., Cornell University, 1952.
- Howard T. Reid** Professor of Personnel and Guidance (1953)
B.A., Brigham Young University, 1940; M.S., Ed.D., University of Southern California, 1947, 1949.
- Ernest F. Reimschuessel** Associate Professor of Horticulture (1942)
B.A., M.S., Brigham Young University, 1940, 1951.
- Alvin C. Rencher** Special Instructor in Mathematics (1963)
B.S., M.A., Brigham Young University, 1959, 1962.
- Ronald L. Rhodes** Instructor in Health Education (1962)
B.S., Elmhurst College, 1957; M.S., Brigham Young University, 1962.
- Owen S. Rich** Associate Professor of Communications (Radio-Television) (1950)
B.S., Brigham Young University, 1950; M.A., University of Southern California, 1953; Ed.D., Pennsylvania State University, 1963.
- Russell R. Rich** Professor of History of Religion (1953)
B.S., Utah State University, 1936; M.A., Brigham Young University, 1949; Ed.D., University of Wyoming, 1955.
- Dale O. Richards** Associate Professor of Statistics (1963)
B.S., Utah State University, 1950; M.S., Ph.D., Iowa State University, 1957, 1963.
- Grant S. Richards** Associate Professor of Animal Science (1945)
B.S., M.S., Utah State University, 1940, 1942.
- Jed J. Richardson** Assistant Professor of Speech (1955)
B.S., M.S., Utah State University, 1950, 1955.
- Dean Rickenbach** Assistant Professor of Business Management (1963)
B.S., Brigham Young University, 1954; M.S., Stanford University, 1957; Ph.D., Indiana University, 1963.
- Eldin Ricks** Assistant Professor of Religious Instruction (1949)
B.S., Brigham Young University, 1941; M.A., University of Southern California, 1949.
- Chauncey C. Riddle** Professor of Philosophy (1952)
B.S., Brigham Young University, 1947; M.A., Columbia University, 1951; Ph.D., Columbia University, 1958.

- *Ted E. Ridenhour** Instructor in English (1959)
B.A., M.A., Brigham Young University, 1957, 1960.
- Gloria M. Rigby** Instructor in Physical Education for Women (1961)
B.S., University of Utah, 1961.
- J. Keith Rigby** Professor of Geology (1953)
B.S., M.S., Brigham Young University, 1948, 1949; Ph.D., Columbia University, 1952.
- Burton W. Robinson** Professor of Clinical Psychology (1955)
B.S., M.S., Utah State University, 1951; Ph.D., Purdue University, 1954.
- Donald W. Robinson** Professor of Mathematics (1956)
B.S., M.A., University of Utah, 1948, 1952; Ph.D., Case Institute of Technology, 1956.
- Clarence F. Robison** Assistant Professor of Physical and Health
Education; Head Track Coach (1948)
B.S., Brigham Young University, 1949; M.S., University of Michigan, 1955.
- R. Max Rogers** Professor of Modern Languages (1945)
B.A., M.A., Brigham Young University, 1940, 1942; Ph.D., Stanford University, 1951.
- Boyd C. Rollins** Associate Professor of Family Life Education (1963)
B.S., Utah State University, 1953; M.S., Brigham Young University, 1958; Ph.D.,
Cornell University, 1961.
- Carl W. Rollins** Instructor in Physical Education (1959)
B.S., M.S., University of Wyoming, 1949, 1950.
- Leslie McKay Rollins** Instructor in Health Education (1962)
B.S., M.S., Brigham Young University, 1961, 1962.
- Ralph L. Rollins** Professor of Civil Engineering (1956)
B.S., M.S., Utah State University, 1941, 1949; Ph.D., Iowa State College, 1954.
- Antone K. Romney** Professor of Educational Psychology;
Dean, College of Education (1945)
B.S., M.S., Brigham Young University, 1933, 1934; Ed.D., Stanford University, 1947.
- Harold E. Rosen** Assistant Professor of Languages (1963)
B.A., M.A., Brigham Young University, 1954, 1959.
- Elmo S. Roundy** Assistant Professor of Physical Education (1963)
B.S., M.Ed., Brigham Young University, 1953, 1956.
- Richard D. Sagers** Professor of Bacteriology (1958)
B.S., M.S., Brigham Young University, 1954, 1955; Ph.D., University of Illinois, 1958.
- Richard D. Salazar** Instructor in Health Education (1963)
B.S., M.S., Brigham Young University, 1958, 1962.
- Clyde D. Sandgren** Vice-President and General Counsel;
Professor of Business Law
B.S., Brigham Young University, 1937; LL.B., St. John's University, 1939.
- Lawrence W. Sardoni** Professor of Music (1945)
B.A., M.A., Brigham Young University, 1935, 1946.
- Donald T. Schmidt** Instructor in Library Science (1959)
B.A., M.A., State University of Iowa, 1947, 1949.
- Richard A. Schmutz** Instructor in History (1963)
B.A., San Fernando Valley State College, 1960.
- Sterling D. Sessions** Associate Professor of Business Management (1961)
B.A., Brigham Young University, 1949; M.A., New York University, 1950; D.B.A.,
Harvard University, 1962.
- Major Paul H. Sharp** Assistant Professor of Air Science (1963)
B.S., Utah State University, 1949.
- *Don D. Shaw** Assistant Professor of Health Education (1959)
B.A., M.S., Brigham Young University, 1957, 1961.
- R. Phil Shumway** Professor of Animal Science (1949)
B.S., Utah State University, 1947; M.S., University of Minnesota, 1949; Ph.D., Utah
State University, 1959.

- Elbert R. Simmons** Assistant Professor of Zoology and Entomology (1956)
B.S., Utah State University, 1941; M.A., State University of Iowa, 1943.
- John M. Simonsen** Professor of Mechanical Engineering (1954)
B.S.M.E., University of Utah, 1950; M.S.M.E., Ph.D., Purdue University, 1952, 1955.
- Karl M. Skousen** Associate Professor of Accounting (1958)
B.S., M.S., Brigham Young University, 1944, 1957; C.P.A., Utah, 1957; Ph.D., Michigan State University, 1962.
- J. Keith Slade** Assistant Professor of Languages (1963)
B.A., University of Arizona, 1959; M.A., Brigham Young University, 1960.
- Arthur D. Slater** Assistant Professor of Personnel and Guidance (1956)
B.S., Brigham Young University, 1948; M.S.W., Tulane University, 1950.
- Lyman F. Smart** Assistant Professor of English (1953)
B.A., Idaho State College, 1950; M.A., University of New Mexico, 1952.
- Carol T. Smith** Instructor in Library Science (1949)
B.A., Brigham Young University, 1940; M.S., University of Southern California, 1962.
- Harold T. Smith** Instructor in Business Education (1963)
B.A., M.A., Colorado State College, 1958, 1959.
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B.A., M.A., Brigham Young University, 1957, 1958; Ph.D., Wayne State University, 1962.
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B.A., University of Utah, 1956; M.A., University of Southern California, 1960.
- Oliver R. Smith** Professor of Communications (1938)
B.A., Brigham Young University, 1938; Ph.D., State University of Iowa, 1951.
- Ralph B. Smith** Professor of Education (1963)
B.S., Brigham Young University, 1943; M.A., University of Southern California, 1947; Ed.D., Brigham Young University, 1962.
- *Robert J. Smith** Professor of Accounting (1949)
B.S., Brigham Young University, 1948; M.B.A., Northwestern University, 1949; C.P.A., Illinois, 1949; C.P.A., Utah, 1950; D.B.A., Indiana University, 1957.
- Ruth S. Smith** Instructor in Speech (1960)
B.S., University of Utah, 1952; M.A., University of Hawaii, 1955.
- Wilford E. Smith** Professor of Sociology (1948)
B.A., University of Utah, 1943; M.A., Brigham Young University, 1948, Ph.D., University of Washington, 1952.
- Rulon N. Smithson** Assistant Professor of Modern Languages (1955)
B.A., M.A., Brigham Young University, 1954, 1955.
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B.S., Brigham Young University, 1957.
- *Karl N. Snow** Instructor in Political Science (1962)
B.S., Brigham Young University, 1956; M.A., University of Minnesota, 1958.
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B.S., Ph.D., University of Utah, 1953, 1957.
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B.S., M.S., Brigham Young University, 1938, 1941; D.P.E., Indiana University, 1955.
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B.S., M.S., Brigham Young University, 1956, 1957.
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B.S., M.A., Brigham Young University, 1951, 1952; M.S., California Institute of Technology, 1952; Ph.D., University of California, Los Angeles, 1961.
- Irene Osmond Spears** Professor of English (1936)
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- Walter H. Speidel** Assistant Professor of Languages (1963)
Certificate of Maturity, Wilhelms-Oberschule, Germany, State Diploma, Interpreter Institute, Germany; M.A., University of Utah, 1960; Ph.D., University of Kansas, 1963.

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B.S., University of Utah, 1939.
- Sidney B. Sperry** Professor of Old Testament Languages
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B.A., University of Utah, 1917; M.A., Ph.D., University of Chicago, 1926, 1931.
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B.S., M.S., Brigham Young University, 1950, 1951; Ph.D., University of Colorado,
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Diploma, Johns Hopkins Hospital, Baltimore, Maryland, 1947; B.S., University of
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B.S., M.A., Brigham Young University, 1953, 1955.
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B.S., Brigham Young University, 1934; M.B.A., Harvard Graduate School of Business Administration, 1937; Ph.D., Graduate School of Business Administration, New York University, 1955.
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- J. Homer Wakefield** Assistant Professor of Music (1949)
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- Rudger H. Walker** Professor of Agronomy; Dean, College of Biological and Agricultural Sciences (1960)
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- Ted J. Warner** Assistant Professor of History (1962)
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- Arthur R. Watkins** Professor of Modern Languages (1952)
B.A., M.A., Brigham Young University, 1941, 1942; Ph.D., Stanford University, 1948.
- Ray Watters** Professor of Health and Physical Education (1957)
B.S., M.S., Utah State University, 1948, 1950; H.S.D., University of Indiana, 1960.

- Paul J. Watts, Jr.** Assistant Professor of Electrical Engineering (1963)
B.E.S., Brigham Young University, 1960.
- Stanley H. Watts** Associate Professor of Physical Education;
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- Max D. Weaver** Associate Professor of Art (1961)
B.S., M.A., Utah State University, 1939, 1955.
- Ross M. Weaver** Assistant Professor of Speech and Dramatic Arts (1959)
B.S., M.S., Utah State University, 1950, 1951.
- *Kurt Weinzinger** Instructor in Music (1956)
Music Diplomas, Academy of Music and Arts, Vienna, Austria, 1951, 1953.
- Stanley L. Welsh** Associate Professor of Botany (1960)
B.S., M.S., Brigham Young University, 1951, 1957; Ph.D., Iowa State University, 1960.
- Dale H. West** Associate Professor of English (1947)
B.A., Brigham Young University, 1940; M.A., University of Southern California, 1955; Ed.D., University of Colorado, 1962.
- Carol B. Wheeler** Instructor in Nursing (1962)
B.S., Brigham Young University, 1956.
- Fred G. White** Assistant Professor of Chemistry (1961)
B.S., M.S., Brigham Young University, 1952, 1956; Ph.D., University of California, 1961.
- Harry E. Wickes** Assistant Professor of Mathematics (1957)
B.S., M.Ed., Brigham Young University, 1950, 1954.
- Marjorie Wight** Instructor in English (1963)
B.A., Brigham Young University, 1943; M.A., University of California at Los Angeles, 1958.
- Theodore A. Wight** Instructor in Mathematics (1963)
B.S., M.S., University of Utah, 1955, 1963.
- Harold E. Wilcox** Instructor in Library Science (1962)
B.A., Brigham Young University, 1955; M.A., University of Wisconsin, 1957; M.S., Rutgers University, 1962.
- Ray T. Wilcox** Assistant Professor of Secondary Education (1957)
B.S., M.Ed., Brigham Young University, 1951, 1954; Ed.D., University of California (Berkeley), 1957.
- Doran F. Wilkes** Assistant Professor of Civil Engineering (1958)
B.S., M.S., Utah State University, 1951, 1955.
- Ernest J. Wilkins** Professor of Modern Languages (1953)
B.A., Brigham Young University, 1947; M.A., Ph.D., Stanford University, 1949, 1954.
- Tess M. Williams** Assistant Professor of Communications
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B.S., Oregon State College, 1951; M.S., Iowa State College, 1956.
- *Arnold Wilson** Assistant Professor of Civil Engineering (1957)
B.S., M.S., Brigham Young University, 1957, 1963.
- Marguerite L. Wilson** Assistant Professor of Special Education (1956)
B.S., University of Utah, 1948; M.A., San Francisco State College, 1955.
- Robert B. Wilson** Assistant Professor of Animal Science (1963)
B.S., Utah State University, 1958; D.V.M., Washington State University, 1961.
- Warren B. Wilson** Associate Professor of Art and Education (1954)
B.S., Utah State University, 1943; M.F.A., State University of Iowa, 1949.
- *William A. Wilson** Instructor in English (1960)
B.A., M.A., Brigham Young University, 1958, 1962.
- Larry T. Wimmer** Assistant Professor of Economics (1963)
B.S., Brigham Young University, 1960; M.S., University of Chicago, 1962.
- T/Sgt. Ernest L. Winder** Special Instructor in Air Science (1962)

- John H. Wing** Assistant Professor of Chemistry (1931)
B.S., M.S., Brigham Young University, 1926, 1934.
- Richard B. Wirthlin** Associate Professor of Economics (1961)
B.S., M.A., University of Utah, 1956, 1957; Ph.D., University of California, 1963.
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B.S., M.S., Brigham Young University, 1952, 1954.
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B.S., Brigham Young University, 1942; M.A., Northwestern University, 1949.
- Glena D. Wood** Associate Professor of English (1952)
B.A., Brigham Young University, 1936; M.A., Ph.D., University of Kentucky, 1949, 1958.
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B.S., M.S., Utah State University, 1946, 1948; Ph.D., University of Kansas, 1953.
- Richard C. Woodbury** Assistant Professor of Electrical Engineering (1959)
B.S., University of Utah, 1956; M.S., Stanford University, 1958.
- *Leon W. Woodfield** Instructor in Accounting (1960)
B.S., M.B.A., University of Utah, 1956, 1957; C.P.A., California, 1959, Utah, 1960.
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B.S., University of Idaho, 1940; M.M., Cincinnati Conservatory of Music, 1948.
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B.A., M.A., Brigham Young University, 1954, 1955; M.S., University of Southern California, 1959.
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B.S., Brigham Young University, 1951.
- David H. Yarn, Jr.** Professor of Philosophy (1950)
B.S., Brigham Young University, 1946; M.A., Ed.D., Columbia University, 1949, 1958.
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B.A., Reed College, 1949; M.S., Ph.D., University of Washington, 1958, 1961.
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B.S., State Teacher's College, Panzer School of Montclair, 1953.
- Hazel Young** Clinical Instructor in Education (1955)
B.A., Brigham Young University, 1933.
- Karl E. Young** Professor of English (1930)
B.A., M.A., Oxford University (England), 1930, 1934.
- (Names of faculty members on leave are marked with an asterisk (*).

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- General Authorities of The Church of Jesus Christ of Latter-day Saints**
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- Jacob Bos**, Special Instructor in Music
- Rulon Brough**, Special Instructor in Machine Accounting
- Adine Bradley**, Special Instructor in Music
- Keith P. Burnham**, B.S., Special Instructor in Psychology
- Theodore Burton**, Special Professor of Religious Instruction
- Merrill Bushnell**, M.B.A., Special Instructor in Industrial Management
- Richard A. Call**, M.D., Special Instructor in Bacteriology
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 Thelma C. Cochran, R.N., B.S., M.A., Special Instructor in Nursing
 William Conover, B.S., M.S., Special Instructor in Sociology
 Pearson H. Corbett, B.S., M.S., Special Instructor in Religion
 Paul G. Cornaby, B.A., M.A., Special Instructor in English
 J. Spencer Cornwall, Special Instructor in Music
 Melvin W. Cox, Special Instructor in Statistics
 Molly Ann Cragun, B.S., Special Lecturer in Recreation
 William J. Critchlow, LL.B., Special Lecturer in Political Science
 Clara Cruser, Special Instructor in Genealogical Research
 Reo Cutler, B.S., M.B.A., Special Lecturer in Investments
 Ralph Dabb, B.A., Special Lecturer in English
 Ray Dabb, Special Lecturer in Horticulture
 Lowell Richard Dalley, Special Instructor in Accounting
 Ronald T. Daly, B.S., M.S., Special Lecturer in Religion
 Bess M. D'Arc, Special Lecturer in Family Relations
 R. J. Davies, B.A., Special Instructor in Languages
 Robert L. Davis, B.A., Special Lecturer in Computer Research
 Rowland W. Day, B.S., Special Lecturer in Religion
 Henry C. Dehm, B.S., M.S., Ph.D., Special Lecturer in Chemistry
 Marlene Detavis, B.S., M.S., Special Instructor in Physical Education
 Donald Francis DeWitt, Special Instructor in Sociology
 C. Ray Dickson, B.S., M.S., Special Instructor in Geography
 Roger L. Dock, B.A., Special Lecturer in Languages
 Don S. Domgaard, Special Lecturer in Computer Programming
 Paul H. Dunn, B.S., M.S., Ed.D., Special Lecturer in Religion
 Reed Durham, B.S., M.S., Special Instructor in Religion
 Earlene Durrant, B.S., M.S., Special Instructor in Physical Education
 Joseph Eckersley, B.S., Special Lecturer in Recreation
 David L. Ellis, B.F.A., B.A., B.S., M.Ed., Special Instructor in Health and Safety
 Dean S. Ellis, B.S., Special Instructor in Speech
 J. Orval Ellsworth, Special Lecturer in Housing and Home Management
 Donald E. Engstrom, Special Lecturer in Key Punch
 Robert Enser, B.A., M.A., Special Instructor in Languages
 Johnathan L. Fairbanks, B.A., M.A., Special Lecturer in Art
 Dean Fairchild, A.A., B.A., M.A., Special Instructor in History, Religion
 Arlo J. Felix, Special Instructor in Industrial Education
 Merle R. Fisher, B.S., M.S., Special Instructor in Graduate Education
 L. LeGrande Fletcher, B.S., M.S., Special Instructor in Industrial Education, Art
 Hartley Fredrickson, Special Lecturer in Computer Research
 George H. Fudge, Special Instructor in Genealogical Research
 David E. Gardner, Special Instructor in Genealogical Research
 Rulon R. Garfield, B.S., M.A., Special Instructor in Political Science

- Roy Garrison, B.S., Special Instructor in Art
 Royal W. Gelder, B.S., Special Lecturer in Insurance
 Mervin W. Gibson, B.S., Special Lecturer in Data Processing.
 Melba Glade, B.A., M.S., Special Instructor in Graduate Education
 Royden J. Glade, B.S., Special Lecturer in Computer Research
 Kenneth W. Godfrey, B.S., M.S., Special Instructor in Religion
 Montchesney Z. Gottfredson, B.A., M.A., Special Lecturer in Religion
 Ruth Gottlieb, Special Instructor in Hebrew
 Lucille Graham, Special Lecturer in Clothing and Textiles
 Harold F. Greene, B.S., E.E., C.L.U., Special Lecturer in Finance
 Milton Grover, B.A., Special Instructor in Languages
 Wayne Gunnell, B.S., M.S., Special Lecturer in Church History
 Ethel S. Guyer, Special Lecturer in Clothing and Textiles
 Stephen P. Hale, B.S., Special Lecturer in Journalism
 John R. Hansen, A.A., B.A., LL.B., Special Instructor in Religion
 Orval H. Hansen, B.A., Special Instructor in Accounting, Political Science
 C. Derek Harland, B.S., Special Instructor in Genealogical Research
 Mabel S. Harmer, B.S., Special Lecturer in English
 Janice J. Harrop, Special Instructor in Physical Education
 Archie J. Haskins, B.A., M.S., Special Lecturer in Teacher Education
 Carolyn S. Haws, Special Instructor in Genealogical Research
 Lola Hendricks, Special Lecturer in Genealogical Research
 Daniel S. Hess, B.S., M.S., Ed.D., Special Instructor in Graduate Education,
 Teacher Education
 Ida Heywood, B.S., M.S., Special Instructor in Clothing and Textiles
 J. Marvin Higbee, B.S., M.S., Special Lecturer in Religion, Physical Education
 Chester W. Hill, B.S., Ed.D., Special Instructor in Music
 Vance Holland, B.A., M.A., Special Instructor in Political Science
 Charles R. Holman, B.S., Special Lecturer in English
 Helmer E. Holmberg, Special Lecturer in Languages
 Daryl Van Dam Hoole, B.S., Special Lecturer in Housing and Home Management
 George Horton, B.S., M.S., Special Lecturer in Religion
 E. Virgil Howell, B.A., M.A., Ph.D., Special Instructor in Religion
 Ivan Hromyk, M.S., Special Lecturer in Languages
 Blanche Humphreys, B.S., M.S., Special Lecturer in Teacher Education
 Maurine R. Humphris, A.S., B.S., Special Lecturer in Housing and Home Manage-
 ment
 Donnell W. Hunter, B.A., M.S., Special Instructor in English
 Marjorie Jackson, B.A., M.A., Special Instructor in Speech
 Carl H. Jacob, B.A., M.A., Special Instructor in Religion, Spanish
 Ruth S. Jacob, Special Instructor in Music
 Carol R. Jacobson, B.A., M.S., Special Instructor in Teacher Education
 Carl Erik Johansson, Special Lecturer in Genealogical Research
 Floyd I. John, B.A., M.A., Ph.D., Special Instructor in Statistics
 LaVerd John, B.S., M.S., Ed.D., Special Instructor in Graduate Education,
 Teacher Education
 C. Cameron Johns, Special Lecturer in Poetry
 Margaret Johnson, Special Instructor in Teacher Education
 Wallace Johnson, B.A., M.A., Special Lecturer in Religion and Genealogical
 Research
 Wendell P. Johnson, B.S., M.S., Ed.D., Special Instructor in Psychology, Graduate
 Education
 Mary Lee Jones, A.S., B.S., Special Instructor in Clothing and Textiles

- Max Kennedy, A.S., B.S., S.M., Special Instructor in Business Management
 Thomas Kershaw, B.A., Special Instructor in Teacher Education
 Clair T. Kilts, B.A., M.A., Special Instructor in History
 James L. Kirschbaum, B.S., M.S., Special Lecturer in Insurance
 Alexander D. Korwek, B.S., B.A., M.B.A., G.D.P., Special Lecturer in Safety Education
 Elwon Lane, Special Instructor in Religion
 Kent S. Larsen, B.A., M.A., Special Instructor in History
 David Andrew Law, B.A., Special Instructor in Political Science
 Robert L. Leake, B.S., M.S., Special Instructor in Health and Safety Education
 Melvin J. LeBaron, B.S., M.S., Special Lecturer in Religion
 Marcene H. Lewis, Special Lecturer in Food and Nutrition
 Delbert W. Lindsay, B.S., M.S., Ph.D., Special Instructor in Botany, Zoology
 Darlene Kae Lowder, B.S., Special Instructor in Recreation
 Lyle J. Lowder, A.S., B.S., M.S., Ph.D., Special Instructor in Bacteriology, Zoology
 William F. Lye, B.S., M.A., Special Instructor in Church History, History, Political Science
 Ellis S McAllister, B.S., M.S., Ph.D., Special Instructor in Sociology, Graduate Education
 Rulon S. McCarrey, B.S., M.S., Ph.D., Special Instructor in Sociology, Family Relations
 E. Cecil McGavin, A.B., M.A., Special Instructor in Religion
 Ralph Martin McGrath, B.A., Special Instructor in Psychology
 Paul McKenna, B.A., M.A., Special Lecturer in Religion
 J. Kent Marlor, B.S., M.S., Special Instructor in Political Science
 Harold S. Marr, Special Lecturer in Insurance
 Elwin W. Marriott, B.S., M.S., Special Instructor in Graduate Education
 Carlyle D. Marsden, B.A., M.A., Special Lecturer in Music
 Daniel Martino, B.S., M.A., Ph.D., Special Instructor in Music
 Robert J. Matthews, B.S., M.S., Special Lecturer in Religion
 Charlotte Sheffield Maxfield, Special Lecturer in Clothing and Textiles
 Theodorus A. Mebuis, Special Lecturer in Languages
 Evan J. Memmott, Special Instructor in Graduate Education, Teacher Education
 Cleston Glade Merrell, B.A., M.A., Special Instructor in Graduate Education, Teacher Education
 Glenn Miller, B.S., M.S., Special Instructor in Teacher Education
 Olga Miller, Special Lecturer in Languages
 Claudia S. Monson, B.S., Special Instructor in Family Relations
 Leland H. Monson, B.A., M.A., Ph.D., Special Lecturer in Religion, English
 Kenneth Moosman, B.S., Special Lecturer in Computer Programming
 Edward B. Moreton, B.S., Special Lecturer in Insurance
 Carolyn C. Morley, B.S., Special Instructor in Teacher Education
 Ernel J. Morton, Special Instructor in Religion, English, Languages
 Evelyn Moyle Nelson, B.A., M.A., Special Lecturer in Housing and Home Management
 Joanne Nelson, R.N., B.S., Special Instructor in Nursing
 Alfred C. Nielsen, B.S., M.S., Special Instructor in Religion and Genealogical Research
 Rudolph A. Noss, Special Lecturer in Languages
 Edward Y. Okazaki, B.A., M.S.W., Special Lecturer in Nursing
 Dennis M. Olsen, B.S., J.D., Special Instructor in Accounting, Economics
 Rex Olsen, B.S., Special Lecturer in Physical Education
 David S. Ostler, B.A., M.B.A., Special Instructor in Business Management
 Almina C. Papworth, B.S., M.S., Special Instructor in Teacher Education

Edward Parker, AB., M.A., Ed.D., Special Instructor in Graduate Education
 Jimmy B. Parker, B.S., Special Instructor in Genealogical Research
 Berkeley H. Parkinson, Special Instructor in Health and Safety Education,
 Physical Education, Recreation
 Ted Parkinson, B.S., Special Instructor in Zoology
 John P. Parry, B.S., Special Instructor in Accounting
 H. Oliver Parson, B.S., M.A., Special Instructor in Art, Teacher Education
 Mary Helen Parsons, B.S., Special Lecturer in Food and Nutrition
 George E. Patterson, B.S., M.S., Special Instructor in Religion
 Albert L. Payne, B.S., M.S., Special Instructor in Religion
 Lorentz C. Pearson, B.S., M.S., Ph.D., Special Instructor in Bacteriology, Botany,
 Zoology
 Jon Gene Perry, B.S., M.A., Special Instructor in English
 H. Lester Petersen, B.S., M.S., Special Instructor in Religion
 Marion V. Peterson, B.S., M.S.W., Special Lecturer in Leadership
 Neil Marcus Peterson, B.S., M.S., Special Instructor in Statistics
 George G. Petkoff, Special Lecturer in Languages
 Maria J. M. Pia, Special Lecturer in Languages
 Albert A. Pieper, B.A., M.A., Special Instructor in Languages
 Johanna W. Plaas, Special Lecturer in Languages
 Paulette O. Poudras, B.A., Special Instructor in Languages
 Robert Powell, Special Instructor in Art
 Elizabeth W. Price, B.S., M.S., Special Instructor in English
 Sterling R. Provost, B.S., M.S., Special Lecturer in Speech
 L. Eugene Reese, B.S., M.S., Special Instructor in Statistics
 Alvin C. Rencher, Special Instructor in Statistics
 Stanley E. Richards, B.S., M.S.W., Special Instructor in Family Relations
 Norman E. Ricks, Special Instructor in History, Political Science
 Tessie Ricks, Special Instructor in Recreation
 Richard Robison, B.A., M.A., Special Instructor in Music
 Herbert Rona, M.A., Ph.D., Special Instructor in Teacher Education
 Keith C. Rooker, B.A., J.D., Special Instructor in Speech, History, Political Science
 Frank E. Sandy, M.A., Special Lecturer in Languages, Recreation
 Howard C. Searle, B.S., M.S., Special Lecturer in Religion
 Atara Sherman, B.A., M.E., Special Lecturer in Languages
 Anna De Ogilvie Sherwood, B.A., M.A., Special Instructor in Clothing and Textiles
 Yoshio R. Shigoka, B.A., Special Lecturer in Languages
 Mack G. Shirley, B.S., M.S., Special Instructor in Teacher Education
 Jay H. Shurtliff, B.S., M.F.A., Special Instructor in Art
 Lorna Shute, B.A., Special Instructor in English
 R. Wayne Shute, B.S., Me.D., Special Lecturer in Religion
 Norman L. Skanchy, B.S., Special Instructor in Teacher Education
 Jay L. Slaughter, Special Instructor in Music
 Charles A. Smith, B.A., M.S., D.M.E., Special Instructor in Music
 Frank Smith, Special Instructor in Genealogical Research
 Keith L. Smith, B.S., Special Lecturer in Housing and Home Management
 Mary Ellen Smith, Special Lecturer in Genealogical Research
 Paul N. Somerville, B.S., Ph.D., Special Lecturer in Computer Research; Special
 Instructor in Statistics
 Ferron W. Sonderreger, B.S., Special Instructor in Industrial Education
 Marjorie Sperry, Special Lecturer in Clothing and Textiles
 Elon Stander, B.S., M.S., Special Instructor in Family Relations

- Eldred C. Stephenson, B.S., M.S., Special Instructor in Accounting, Business Education
- LeConte Stewart, Special Instructor in Art
- Madge Stoddard, Special Lecturer in Physical Education
- Don A. Stringham, B.S., Special Lecturer in Economics
- Shawna E. Strobel, B.S., Special Instructor in Clothing and Textiles, Housing and Home Management
- Ezra S. Stucki, B.S., M.S., Special Instructor in Graduate Education, Teacher Education
- J. Wendell Stucki, B.S., M.S., Special Instructor in Agricultural Economics
- Floyd Sucher, A.A., B.S., M.A., Ed.D., Special Instructor in Graduate Education
- Melvin S. Tagg, B.Ed., M.S., Special Instructor in Religion
- Sergio F. Talavera, Special Instructor in Languages
- William C. Tanner, B.S., M.A., Ph.D., Special Instructor in Psychology, Family Relations
- Rowan S. Taylor, B.A., M.A., Special Lecturer in Music
- E. LaVoy Thomas, B.A., M.A., Special Instructor in Sociology
- Grant R. Thomas, B.S., M.S., Special Instructor in Accounting, Business Management, Economics
- Lera P. Thomson, B.S., M.Ed., Special Instructor in Teacher Education
- John L. Threlkeld, Special Lecturer in Horticulture
- Fred H. Tingey, B.S., M.S., Ph.D., Special Instructor in Statistics
- Vernon G. Todd, B.S., Special Lecturer in Computer Research
- Raili I. Turunen, Special Lecturer in Languages
- Reed L. Tyler, B.A., Special Instructor in Art
- Curtis N. Van Alfen, B.S., Special Instructor in Graduate Education, Teacher Education
- Nicholas Van Alfen, B.A., M.A., Special Lecturer in Religion
- Wayne H. Wadsworth, B.S., J.D., Special Instructor in Political Science
- Bruce Wainwright, B.S., M.Ed., Special Instructor in Family Relations, Graduate Education
- Wilson C. Walker, M.S., Special Instructor in Psychology
- Thomas W. Ward, Jr., B.A., Special Instructor in Health and Safety Education
- Vesta Ann Ward, B.S., Special Lecturer in Art
- Mary Roberts Warnock, A.B., Special Lecturer in Art
- Lyle Watson, B.S., Special Instructor in Dramatic Arts, Speech, English
- Alexandra Wegner, B.A., Special Lecturer in Languages
- Jerry D. Wells, A.A., Special Instructor in Genealogical Research
- Orson West, Special Lecturer in Languages
- Walter J. Wharton, B.A., Special Lecturer in Safety Education
- Lusarah B. Whitall, Special Lecturer in Genealogical Research
- Charles Kay Wilkins, Special Instructor in Dramatic Arts
- Arletta Williams, Special Instructor in Graduate Education, Teacher Education
- Julie Minde Wilson, Special Lecturer in Languages
- Earl P. Wixom, B.S., M.S., Special Instructor in Art
- John Karl Wood, Special Lecturer in Religion
- Thomas B. Woodbury, B.A., Special Instructor in Languages
- Charles Woodworth, A.S., B.S., M.S.W., Special Instructor in Sociology
- Lyman M. Woolley, Special Lecturer in Computer Research
- Norman E. Wright, B.S., M.S., Special Instructor in Genealogical Research
- Ralph M. Wright, B.S., M.S., Special Instructor in Business Management
- Ruth C. Wright, R.N., B.S., M.S., Special Instructor in Nursing
- Jean Wunderlick, B.A., M.A., Special Lecturer in Religion
- Wayne E. Wyler, B.S., M.S., Special Instructor in Accounting

Lawrence F. Wyss, B.F.A., Special Instructor in Housing and Home Management
John Zenger, B.S., M.B.A., Special Lecturer in Human Relations
David B. Zenoff, B.A., M.B.A., D.B.,A. Special Instructor in Business Management

THE STAFF OF THE LABORATORY SCHOOLS

Edwin A. Read Director of Laboratory Schools (1959)
H. David Nelson Assistant Director of Laboratory Schools for
 Secondary Education (1962)
J. Clair Morris Assistant Director of Laboratory Schools for
 Elementary Education (1962)

The Elementary School

***Ruel Allred** Assistant Director of Laboratory Schools for the
Elementary School (1961)
B.S., M.S., Brigham Young University, 1954, 1958.

Vermont C. Harward Intermediate Grades and Elementary Methods (1962)
B.S., Brigham Young University, 1954.

Marvin Nelson Intermediate Grades and Elementary Methods (1959)
B.S., M.S., Brigham Young University, 1951, 1961.

Mima Rasband Primary Grades and Elementary Methods (1952)
B.S., M.S., Brigham Young University, 1937, 1950.

Carma Sandberg Librarian (1957)
B.A., M.A., Brigham Young University, 1932, 1960.

June Searle Intermediate Grades and Elementary Methods (1961)
B.S., Brigham Young University, 1958.

Jane G. Storrs Primary Grades and Elementary Methods (1962)
B.S., M.S., Brigham Young University, 1946, 1960.

The Secondary School

Verl Allman	Biological Sciences (1950)
B.S., M.S., Brigham Young University, 1948, 1952.	
Wallace Allred	Mathematics (1956)
B.S., M.Ed., Brigham Young University, 1956, 1957.	
Marvin Rex Arnett	Foreign Languages (1962)
B.A., Brigham Young University, 1961.	
Grant D. Bendixsen	Core-Curriculum (1954)
B.S., M.S., Brigham Young University, 1949, 1953.	
Owen C. Bennion	Physical Science (1962)
B.S., Brigham Young University, 1955; M.S., University of Utah, 1960.	
June E. Berry	Librarian (1948)
B.S., Brigham Young University, 1947; M.S., University of Utah, 1952.	
Faye J. Buttle	Core-Curriculum (1951)
B.A., M.Ed., M.A., Brigham Young University, 1927, 1953, 1954.	
Julia A. Caine	History, Social Studies (1941)
B.S., Brigham Young University, 1925; M.A., Colorado State College of Education, 1950.	
Louis J. Chatterley	Mathematics (1962)
B.S., Brigham Young University, 1955; M.S., University of Utah, 1962.	
Janean Green Chipman	English (1963)
B.S., Utah State University, 1960.	

- Douglas G. Garbe** Mathematics (1963)
B.S., Brigham Young University, 1962.
- Jed Gibson** Physical Education and Health (1961)
B.S., M.S., University of Utah, 1956, 1958.
- Anna B. Hart** English (1939)
B.S., Utah State University, 1922; M.A., University of Southern California, 1933;
M.Ed., George Peabody College for Teachers, 1949.
- A. LeMar Hendrickson** English (1963)
B.S., M.S., Utah State University, 1938, 1941.
- Ross C. Hilton** Industrial Arts (1957)
B.S., Utah State University, 1951.
- Nancy E. Johnson** English (1963)
B.S., Brigham Young University, 1958.
- Courtney M. Leishman** Physical Education (1962)
B.S., Utah State University, 1958; M.S., Brigham Young University, 1962.
- Don L. McConkie** Social Studies (1953)
B.S., M.S., Brigham Young University, 1927, 1942.
- Ward Magleby** Religion (1957)
B.S., M.S., Utah State University, 1939, 1946.
- William E. Mathis** Instrumental Music (1962)
B.S., M.S., Brigham Young University, 1957, 1961.
- Wallace Montague** Religion (1961)
B.S., Brigham Young University, 1949.
- Thomas J. Patten** Foreign Languages (1963)
B.A., Brigham Young University, 1957.
- Donald M. Peck, Jr.** Mathematics (1962)
B.S., University of Utah, 1958.
- R. Gary Penrod** Social Studies (1962)
B.A., Brigham Young University, 1959.
- Norma LaRene Petersen** English (1963)
B.A., University of Chicago, 1959.
- *LeRoy Porter** Counselor (1957)
B.S., Brigham Young University, 1954.
- Thomas Laine Raty** Art (1963)
B.S., M.S., Brigham Young University, 1950, 1961.
- *Lowell D. Thomson** Mathematics and Physical Science (1958)
B.A., Humboldt State College, 1952; M.S., University of Utah, 1958.
- Donna Lee Turley** Counselor (1959)
B.S., Brigham Young University, 1953.
- Fredrick N. Webb** Vocal Music (1948)
B.A., M.A., Brigham Young University, 1933, 1954.
- Richard R. Wootton** Counselor (1962)
B.S., M.S., Brigham Young University, 1956, 1961.

ENROLLMENT SUMMARY 1961-62
PROVO, UTAH
AS OF AUGUST 31, 1962

College	Freshman	Sophomore	Junior	Senior	Professional	Graduate	Men	Women	Total
Biological and Agricultural Sciences	346	184	208	172			763	147	910
Business	448	229	369	369			1012	403	1415
Education	594	313	379	457		2	447	1298	1745
Family Living	349	255	213	168			13	972	985
Fine Arts	299	152	171	169			277	514	791
General College	1319	776	344	114		1	1425	1129	2554
Humanities and Social Sciences	589	400	450	479			1017	901	1918
Nursing	139	50	37	30			2	254	256
Physical and Engineering Sciences	512	263	282	236	81		1306	68	1374
Physical Education	127	71	86	110			235	159	394
Graduate School						2093	1391	702	2093
Total Daytime College Students	4722	2693	2539	2304	81	2096	7888	6547	14435**
on Campus								819	1458
Evening College Students on Campus									15893
Net Cumulative Total College Level									
B.Y.U. Laboratory Schools									
Elementary School									
Junior High School							101	98	199
Senior High School							103	95	198
							101	91	192
Total, B.Y.U. Laboratory Schools									589
TOTAL STUDENTS ON B.Y.U. CAMPUS									16482*

*Complete for the school year 1961-62, including Summer School 1962.

**Total enrollment for Fall and Spring Semesters only was 12,579. Total Summer School enrollment was 3,919 of whom 1,856 attended Summer School only.

Indonesia		East Africa		New South Wales	1
Java	1	Ethiopia	2		
	1	Kenya	2		8
			4		
Far East		Union of South Africa		Polynesia	
Hong Kong	51	Southwest Africa	1	New Zealand	10
Japan	14		1	Samoa Islands	6
Nationalist China			1	Tonga Islands	2
(Formosa)	8			Fiji Islands	4
North Korea	4	Australia			
South Korea	4	Australia	5		22
		Southern Australia ...	2	Unclassified	4
	81				

Recapitulation

United States	
New England States	80
Middle Atlantic States	221
East North Central States	290
West North Central States	182
South Atlantic States	351
East South Central States	58
West South Central States	172
Mountain States	8866
Pacific Coast States	3614
Other Anglo-America	299
Latin America	76
Europe	49
Middle East	40
Southern and Eastern Asia	98
Trans-Saharan Africa	5
Oceania	30
Unclassified	4
GRAND TOTAL	14,435

**BRIGHAM YOUNG UNIVERSITY 1961-62 CUMULATIVE FALL AND SPRING
SEMESTER AND SUMMER ENROLLMENT, REGULAR DAYTIME STUDENTS
FROM STAKES AND MISSIONS AS OF AUGUST 31, 1962**

Alaska	6	Blaine	23	Cedar	22
Alberta	46	Boise	47	Cedar West	21
Albuquerque	48	Bonneville	36	Cheyenne	40
Alpine	167	Bountiful	32	Chicago	86
American Falls	20	Bountiful North	17	Cincinnati	23
American River	52	Bountiful South	23	Cleveland	2
Ashley	48	Box Elder	25	Clearfield	18
Ammon	9	B.Y.U. Campus	55	Columbia River	81
Atlanta	15	B.Y.U. 2 Campus	43	Columbus	3
Auckland	5	B.Y.U. 3 Campus	41	Cottonwood	33
Bakersfield	41	Burbank	79	Covina	42
Bannock	14	Burley	61	Craig	11
Bear Lake	16	Butte	31	Cumoraah	2
Bear River	7	Cache	4	Dallas	23
Beaumont	1	Calgary	26	Davis	41
Beaver	28	Cannon	5	Denver	56
Ben Lomond	20	Canoga Park	2	Denver West	37
Ben Lomond South ..	5	Canyon Rim	33	Deseret	56
Benson	8	Carbon	48	Detroit	41
Big Horn	82	Casper	1	Duchesne	39
Blackfoot	27	Cassia	30	East Cache	20

East Idaho	30	Las Vegas North	43	Oahu	37
East Jordan	28	Layton	35	Oakland Berkeley	108
East Long Beach	39	Lehi	92	Ogden	19
East Los Angeles	56	Lethbridge	44	Oklahoma	10
East Mesa	69	Lewiston	17	Olympus	23
East Mill Creek	39	Liberty	11	Oneida	32
East Ogden	36	Logan	5	Oquirrh	18
East Phoenix	49	London	2	Orange County	33
East Pocatello	11	Long Beach	48	Orem	103
East Provo	275	Lorin Farr	32	Orem West	132
East Rigby	25	Los Angeles	86	Orlando	21
East Sharon	341	Lost River	20	Palmyra	64
Edmonton	9	Lyman	32	Palo Alto	67
El Paso	50	Malad	22	Palomar	18
Emery	44	Manchester	3	Panguitch	19
Emigration	13	Maricopa	50	Park Stake	14
Ensign	36	Melbourne	6	Parley	26
Farr West	16	Mesa	67	Parowan	10
Flagstaff	32	Miami	7	Pasadena	96
Florida	20	Midvale	36	Philadelphia	10
Franklin	28	Millard	44	Phoenix	23
Fresno	35	Millcreek	15	Phoenix North	30
Garden Grove	4	Minidoka	47	Pikes Peak	10
Garfield	12	Minnesota	11	Pioneer	9
Glendale	94	Missoula	23	Pocatello	17
Gooding	48	Mojave	26	Portland	83
Grand Coulee	56	Moapa	35	Portneuf	26
Grand Junction	37	Monterey Bay	21	Provo	163
Granger	9	Montpelier	34	Puget Sound	33
Granger North	4	Monument Park	29	Raft River	19
Granite	19	Monument Park		Redding	10
Granite Park	11	West	15	Redondo	31
Grant	32	Morgan	9	Redwood	2
Grantsville	28	Moroni	12	Reno	46
Great Falls	39	Mt. Graham	33	Reno North	1
Greenboro	4	Mt. Jordan	44	Reseda	53
Gridley	46	Mt. Logan	6	Rexberg	43
Gunnison	10	Mt. Ogden	17	Richland	92
Hamilton	5	Mt. Rubidoux	83	Rigby	35
Hayward	76	Murray	14	Riverdale	21
Highland	26	Murray South	25	Riverside	11
Hillside	22	Nampa	101	Riverton	17
Holladay	43	Napa	38	Roosevelt	34
Honolulu	25	Nebo	113	Rose Park	7
Houston	26	Nevada	43	Roy Stake	2
Humboldt	22	New Jersey	41	Sacramento	44
Huntington Park	61	New Orleans	9	St. George	21
Hyrum	8	New York	45	St. George East	20
Idaho	31	North Box Elder	23	St. Johns	51
Idaho Falls	59	North Carbon	26	St. Joseph	25
Indianapolis	15	North Carolina	2	St. Louis	10
Inglewood	76	North Davis	26	Salem	24
Juab	38	North Idaho Falls	64	Salmon River	5
Juarez	44	North Jordan	19	Salt Lake	16
Kanab	29	North Pocatello	18	San Antonio	10
Kaysville	8	North Rexberg	26	San Bernardino	71
Kansas City	33	North Sacramento	30	San Diego	77
Kearns	8	North Sanpete	30	San Diego East	51
Kearns North	3	North Seattle	47	Sandy	30
Klamath	53	North Sevier	14	San Fernando	74
Kolob	118	North Tooele	25	San Francisco	22
Lake Mead	43	North Weber	5	San Joaquin	44
Lake View	12	Norwalk	15	San Jose	28
Las Vegas	82	Nyssa	44	San Juan	67

San Leandro	6	Twin Falls	63	Canadian	13
San Luis	17	Uintah	33	Central American	1
San Luis Obispo	11	Union	51	Central Atlantic	
San Mateo	56	University Stake	9	States	53
Santa Ana	41	University West	19	Central German	2
Santa Barbara	34	Utah	175	Central States	23
Santa Monica	63	Utah State		East Central States	33
Santa Rosa	34	University	10	Eastern Atlantic	
Santaquin Tintic	31	Uvada	21	States	12
Seattle	52	Valley View	31	Eastern States	65
Sevier	54	Vancouver	7	Finnish	4
Sharon	164	Virginia	24	Florida	5
Shelley	38	Walnut Creek	71	French	3
Shreveport	18	Wasatch	69	French East	1
Smithfield	9	Washington	118	Great Lakes	32
Snowflake	42	Wayne	15	Gulf States	28
South Bear River	20	Weber	12	Hawaiian	19
South Blackfoot	60	Weber Heights	13	Mexican	1
South Carolina	18	Weiser	55	Netherlands	1
South Cottonwood	6	Wells	12	New England	41
South Davis	25	West Boise	66	North British	1
South Idaho Falls	73	West Covina	24	North Central	
South Los Angeles	44	West Jordan	36	States	26
South Ogden	13	West Pocatello	9	Northern California	24
South Salt Lake	12	West Sharon	100	Northern Far East	11
South Sanpete	34	West Utah	159	Northern Mexican	3
South Sevier	30	Whittier	44	Northern States	63
South Summit	38	Wilford	31	Northwestern States	53
Southern Arizona	9	Willamette	31	Norwegian	3
Spanish Fork	97	Woodruff	22	Samoa	5
Spokane	51	Winter Quarters	15	South German	2
Springville	121	Winder	13	Southern Far East	11
Star Valley	43	Yakima	22	Southern States	39
Sugar House	20	Yellowstone	36	Southwest Indian	11
Summit	12	Young	77	Spanish American	9
Sydney	1	Yuma	30	Swiss Austrian	2
Taber	16	Zion Park	20	Texas	4
Tacoma	28	Unclassified	86	Tongan	5
Tampa	4			Uruguayan	1
Taylor	54	MISSIONS			
Taylorville	23	Andes	2	West Central States	84
Temple View	10	Alaska-Canadian	6	West German	1
Teton Stake	31	Argentina	1	West Mexican	1
Timpanogos	130	Australian	2	Western Canadian	11
Tooele	26	Brazilian	2	Western States	24
Torrance	27	Brazilian South	3	Unidentified	4
Toronto	7	British	1	Unclassified	128
Tucson	27	California	21	Non-L.D.S. Students	1024
Tulsa	4				14,435

**BRIGHAM YOUNG UNIVERSITY 1961-62 CUMULATIVE FALL AND SPRING
SEMESTER AND SUMMER ENROLLMENT, REGULAR DAYTIME COLLEGE
STUDENTS FROM THE COUNTIES OF UTAH AS OF AUGUST 31, 1962**

Beaver	28	Garfield	30	Rich	6
Box Elder	66	Grand	20	Salt Lake	998
Cache	75	Iron	57	San Juan	50
Carbon	78	Juab	53	Sanpete	94
Daggett	4	Kane	22	Sevier	98
Davis	217	Millard	104	Summit	50
Duchesne	73	Morgan	9	Tooele	81
Emery	48	Piute	7	Uintah	83

Utah	2898	Washington	64	Weber	244
Wasatch	74	Wayne	21	Unidentified	10
					<u>5,662</u>

REGISTRATION THROUGH ADULT EDUCATION AND EXTENSION SERVICES

September 1, 1961 - August 31, 1962

Academic College	Credit Courses		Noncredit Courses		Totals	
	Enroll- ments	*F.T.E.S.	Enroll- ments	*F.T.E.S.	Enroll- ments	*F.T.E.S.
Biol. & Agr. Sciences	463	38.2	232	8.6	695	46.8
Business	760	73.1	654	38.1	1,414	111.2
Education	2,119	154.9	1,347	30.8	3,466	185.7
Family Living	413	31.1	1,123	34.6	1,536	65.7
Fine Arts	1,155	81.2	835	51.5	1,990	132.7
General College	693	57.2	2,149	102.0	2,842	159.2
Hum. & Soc. Sciences	4,066	462.7	2,048	105.5	6,114	568.2
Nursing			25	2.0	25	2.0
Phys. & Eng. Sciences	1,218	125.6	261	11.9	1,479	137.5
Physical Education	870	45.3	2,432	152.7	3,302	198.0
Religious Instruction	1,795	119.4	5,763	168.9	7,558	288.3
Unclassified	18	1.1	8,384	157.1	8,402	158.2
TOTALS	13,570	1,189.8	25,253	863.7	38,823	2,053.5

*Full-time equivalent student

ENROLLMENT SUMMARY 1962-63
PROVO, UTAH
AS OF AUGUST 26, 1963

College	Freshman	Sophomore	Junior	Senior	5th Year		Women	Total
					Professional	Graduate		
Biological and Agricultural Sciences	406	246	214	247	916		197	1113
Business	364	336	348	384	1049		383	1432
Education	549	446	456	537	490		1498	1988
Family Living	341	288	290	210	14		1115	1129
Fine Arts	259	189	142	161	288		463	751
General College	1687	768	405	169	1720		1309	3029
Humanities and Social Sciences	595	523	590	603	1229		1082	2311
Nursing	138	61	67	26			292	292
Physical and Engineering Sciences	551	330	310	237	1423		84	1507
Physical Education	139	90	101	122	255		197	452
Graduate School					1915		734	1915
Total Daytime College Students on Campus	5029	3277	2923	2696	79	1915	7354	15919**
Evening College Students on Campus							963	1767
Net Cumulative Total College Level								
B.Y.U. Laboratory Schools								
Elementary School								17686
Junior High School							93	196
Senior High School							94	198
Total, B.Y.U. Laboratory Schools							112	211
TOTAL STUDENTS ON B.Y.U. CAMPUS							605	18291*

*Complete for the school year 1962-63, Including Summer School 1963.

**Total enrollment for Fall and Spring Semesters only was 14,157. Total Summer School enrollment was 4,160 of whom 1,762 attended Summer School only.

**BRIGHAM YOUNG UNIVERSITY 1962-63 CUMULATIVE FALL AND SPRING
SEMESTER AND SUMMER ENROLLMENT, REGULAR DAYTIME STUDENTS,
PROVO CAMPUS, ACCORDING TO STATES AND FOREIGN AREAS
AS OF AUGUST 26, 1963**

New England States		West South Central		Eastern South America	
Maine	10	Arkansas	11	Argentina	2
New Hampshire	23	Louisiana	21	Brazil	3
Vermont	2	Oklahoma	22	Paraguay	1
Massachusetts	27	Texas	147	Uruguay	2
Rhode Island	1				
Connecticut	26		201		8
	89				
Middle Atlantic States		Mountain States		Northern Europe	
New York	138	Montana	196	Denmark	2
New Jersey	66	Idaho	1553	Finland	8
Pennsylvania	61	Wyoming	272	Norway	4
	265	Colorado	293	Sweden	1
		New Mexico	181		15
		Arizona	578		
		Utah	6000		
		Nevada	373		
			9446		
East North Central		Pacific Coast States		British Isles	
Ohio	71	Alaska	22	England	13
Indiana	41	Hawaii	90	Scotland	1
Illinois	116	Washington	484		14
Michigan	75	Oregon	493		
Wisconsin	38	California	3095		
	341		4184		
West North Central		Dominion of Canada		Western Europe	
Minnesota	16	Alberta	276	Belgium	1
Iowa	31	British Columbia	18	France	7
Missouri	53	Manitoba	7	Netherlands	1
North Dakota	10	Maritime Prov.	2	Switzerland	2
South Dakota	17	Ontario	35		11
Nebraska	30	Quebec	6		
Kansas	44	Saskatchewan	10		
	201				
South Atlantic States			354	Southern Europe	
Delaware	3			Greece	8
Maryland	47				8
Virginia	126			East Central Europe	
Washington, D.C.	20			East Germany	10
West Virginia	8			West Germany	2
North Carolina	49				12
South Carolina	23			Eastern Mediterranean	
Georgia	25			Iran	43
Florida	89			Iraq	2
	390			Israel	1
East South Central		Central America and Mexico		Jordan	2
Kentucky	13	Canal Zone	1	Lebanon	4
Tennessee	18	Costa Rica	2	Turkey	1
Alabama	10	Guatemala	2		53
Mississippi	19	Honduras	1		
	60	Puerto Rico	2		
		Mexico	52		
			60		
		Western South America and Andean Countries		Arabian Peninsula	
		Chile	2	Saudi Arabia	6
		Peru	8		6
		Bolivia	1		
			11		
				Southern Asia	
				India	12
				Pakistan	4
					16

Southeast Asia		South Korea	4	Southern Australia	2
Thailand	2	Communist China	1	Netherlands New	
	—	Philippines	1	Guinea West	3
	2				15
Indonesia			101		
Indonesia	2	East Africa			
Java	1	Kenya	1	Polynesia	
	—		—	Marquesas Islands	4
	3		1	New Zealand	8
Far East		Union of South Africa		Samoa Islands	3
Hong Kong	46	Southwest Africa	1	Tonga Islands	1
Japan	17		—	Society Islands	1
Nationalist China			1		17
(Formosa)	25	Australia		Unclassified	34
North Korea	7	Australia	10		

Recapitulation

United States		
New England States	89	
Middle Atlantic States	265	
East North Central States	341	
West North Central States	201	
South Atlantic States	390	
East South Central States	60	
West South Central States	201	
Mountain States	9446	
Pacific Coast States	4184	
Other Anglo-America	354	
Latin America	79	
Europe	60	
Middle East	59	
Southern and Eastern Asia	122	
Trans-Saharan Africa	2	
Oceania	32	
Unclassified	34	
GRAND TOTAL		15,919

**BRIGHAM YOUNG UNIVERSITY 1962-63 CUMULATIVE FALL AND SPRING
SEMESTER AND SUMMER ENROLLMENT, REGULAR DAYTIME STUDENTS
FROM STAKES AND MISSIONS AS OF AUGUST 26, 1963**

Alaska	12	Ben Lomond South ..	8	Cache	1
Alberta	60	Benson	10	Calgary	30
Albuquerque	48	Big Horn	101	Cannon	8
Alpine	182	Blackfoot	29	Canoga Park	4
American Falls	22	Blaine	28	Canyon Rim	46
American Fork	3	Boise	55	Carbon	37
American River	47	Bonneville	32	Casper	5
Ammon	27	Boston	8	Cassia	22
Apia	1	Bountiful	28	Cedar	13
Ashley	48	Bountiful North	21	Cedar West	30
Atlanta	22	Bountiful South	22	Cheyenne	42
Auckland	4	Box Elder	30	Chicago	90
Bakersfield	38	B.Y.U. Campus	49	Chicago South	3
Bannock	13	B.Y.U. 2 Campus	36	Cincinnati	22
Bear Lake	11	B.Y.U. 3 Campus	43	Clearfield	20
Bear River	11	Burbank	75	Cleveland	9
Beaumont	7	Burley	51	Coeur D'Alene	1
Beaver	30	Butte	38	Columbia River	93
Ben Lomond	16	Butler	2	Columbus	9

Cottonwood	27	Hyrum	7	Nebo	105
Covina	37	Idaho	27	Nevada	45
Craig	22	Idaho Falls	62	New Jersey	49
Cumorah	9	Indianapolis	18	New Orleans	13
Dallas	27	Inglewood	82	New York	56
Davis	23	Illinois	1	North Box Elder	27
Denver	60	Juab	55	North Carbon	18
Denver West	50	Juarez	42	North Carolina	8
Deseret	69	Kanab	27	North Davis	29
Detroit	44	Kaysville	12	North Idaho Falls	68
Duchesne	58	Kansas City	31	North Jordan	29
East Cache	12	Kearns	10	North Pocatello	16
East Idaho	40	Kearns North	5	North Rexburg	28
East Jordan	26	Klamath	62	North Sacramento	28
East Long Beach	62	Kolob	118	North Sanpete	19
East Los Angeles	60	Lake Mead	34	North Seattle	47
East Mesa	59	Lake View	13	North Sevier	18
East Mill Creek	26	Lansing	15	North Tooele	28
East Ogden	32	Las Vegas	110	North Weber	6
East Phoenix	41	Las Vegas North	52	Norwalk	19
East Pocatello	22	Layton	24	Nyssa	56
East Provo	289	Lehi	93	Oahu	32
East Rigby	29	Lethbridge	47	Oakland Berkeley	112
East Sharon	391	Lewiston	17	Ogden	19
Edmonton	16	Liberty	11	Oklahoma	13
El Paso	51	Logan	1	Olympus	26
Emery	38	London	2	Oneida	30
Emigration	22	Long Beach	44	Oquirrh	12
Ensign	47	Lorin Farr	27	Orange County	47
Farr West	11	Los Angeles	86	Orem	120
Flagstaff	42	Lost River	21	Orem West	151
Florida	25	Lyman	37	Orlando	26
Fort Wayne	7	Malad	25	Palmyra	82
Franklin	31	Manchester	3	Palo Alto	75
Fresno	62	Maricopa	43	Palomar	42
Garden Grove	19	Melbourne	7	Panguitch	26
Garfield	6	Mesa	63	Park Stake	22
Glendale	116	Mesa South	1	Parley	39
Gooding	33	Miami	15	Parowan	8
Grand Coulee	66	Midvale	49	Pasadena	99
Grand Junction	41	Millard	47	Pearl Harbor	6
Granger	13	Millcreek	15	Philadelphia	19
Granger North	11	Minidoka	44	Phoenix	29
Granite	16	Minnesota	13	Phoenix North	43
Granite Park	8	Missoula	32	Pikes Peak	17
Grant	30	Moapa	22	Pioneer	11
Grantsville	34	Mojave	49	Pocatello	17
Great Falls	49	Monterey Bay	32	Pomona	22
Greenboro	4	Montpelier	36	Portland	104
Gridley	56	Monument Park	30	Portneuf	21
Gunnison	19	Monument Park		Provo	184
Hamburg	1	West	19	Puget Sound	47
Hamilton	4	Morgan	12	Potomac	1
Hawkes Bay	1	Moroni	10	Raft River	18
Hayward	64	Mt. Graham	34	Redding	20
Highland	16	Mt. Jordan	47	Redondo	27
Hillside	27	Mt. Logan	5	Redwood	13
Holladay	49	Mt. Ogden	8	Reno	37
Holland	1	Mt. Rubidoux	63	Reno North	14
Honolulu	24	Murray	10	Reseda	52
Houston	30	Murray South	32	Rexburg	42
Humboldt	17	Nampa	122	Richland	103
Huntington Park	52	Napa	43	Rigby	41

Riverdale	19	Sydney	2	British	1
Riverside	9	Taber	16	California	21
Riverton	25	Tacoma	21	Canadian	13
Roosevelt	43	Tampa	5	Central American	1
Rose Park	7	Taylor	61	Central Atlantic	
Roy	4	Taylorville	23	States	38
Sacramento	45	Temple View	8	Central States	27
St. George	19	Teton Stake	39	East Central States ..	41
St. George East	26	Timpanogos	135	Eastern Atlantic	
St. Johns	45	Tooele	33	States	23
St. Joseph	20	Torrance	31	Eastern States	51
St. Louis	15	Toronto	9	Finnish	4
Salem	30	Tucson	33	Florida	14
Salmon River	10	Tulsa	7	French	3
Salt Lake	25	Twin Falls	88	Great Lakes	24
San Antonio	8	Uintah	33	Gulf States	26
San Bernardino	67	Union	59	Hawaiian	8
San Diego	63	University Stake	23	Mexican	3
San Diego East	45	University West	16	Netherlands	1
San Diego South	1	Utah	170	New England	49
Sandy	40	Utah State		North Central	
Sandy East	1	University	8	States	23
San Fernando	88	Uvada	18	Northern California ..	12
San Francisco	30	Valley View	36	Northern Far East ..	11
San Joaquin	71	Vancouver	9	North German	1
San Jose	46	Virginia	27	Northern Mexican	4
San Juan	71	Walnut Creek	96	Northern States	60
San Leandro	30	Wasatch	66	Northwestern States ..	47
San Luis	31	Washington	149	Norwegian	2
San Luis Obispo	19	Washington Terrace ..	1	Samoan	3
San Mateo	64	Wayne	13	South German	2
Santa Ana	40	Weber	10	Southern Far East	8
Santa Barbara	53	Weber Heights	17	Southern States	18
Santa Monica	79	Weiser	47	Southern Australian ..	1
Santa Rosa	43	Wells	11	Southwest Indian	10
Santaquin Tintic	28	West Boise	73	Spanish American	9
Scottsdale	2	West Covina	44	Swedish	1
Seattle	59	West Jordan	34	Swiss Austrian	1
Sevier	65	West Pocatello	9	Texas	16
Sharon	184	West Sharon	116	Tongan	1
Shelley	29	West Utah	149	Uruguayan	1
Shreveport	18	Whittier	59	West Central States ..	80
Smithfield	4	Wichita	2	West German	2
Snowflake	62	Wilford	33	West Mexican	1
South Bear River	12	Willamette	41	Western Canadian	11
South Blackfoot	40	Winder	17	Western States	22
South Carolina	19	Wind River	2	Unidentified	2
South Cottonwood	9	Winter Quarters	18	Unclassified	69
South Davis	34	Woodruff	21	Non-L.D.S. Students	1010
South Idaho Falls	73	Yakima	31		
South Los Angeles	45	Yellowstone	33		
South Ogden	13	Young	94		
South Salt Lake	11	Yuma	38		
South Sanpete	34	Zion Park	12		
South Sevier	31	Unclassified Stake ..	394		
South Summit	37				
Southern Arizona	8				
Spanish Fork	116				
Spokane	62	Alaska Canadian	9		
Springville	149	Andes	2		
Star Valley	43	Argentine	3		
Sugar House	22	Australian	2		
Summit	13	Brazilian	1		

MISSIONS

15,919

**BRIGHAM YOUNG UNIVERSITY 1962-63 CUMULATIVE FALL AND SPRING
SEMESTER AND SUMMER ENROLLMENT, REGULAR DAYTIME COLLEGE
STUDENTS FROM THE COUNTIES OF UTAH AS OF AUGUST 26, 1963**

Beaver	30	Juab	63	Tooele	91
Box Elder	62	Kane	15	Uintah	78
Cache	65	Millard	119	Utah	3145
Carbon	60	Morgan	14	Wasatch	70
Daggett	4	Piute	8	Washington	61
Davis	210	Rich	5	Wayne	16
Duchesne	104	Salt Lake	1118	Weber	213
Emery	40	San Juan	51	Unidentified	7
Garfield	28	Sanpete	86		
Grand	24	Sevier	116		
Iron	49	Summit	48		6,000

REGISTRATION THROUGH ADULT EDUCATION AND EXTENSION SERVICES

September 1, 1962 - August 31, 1963

Academic College	Credit Courses		Noncredit Courses		Totals	
	Enroll- ments	*F.T.E.S.	Enroll- ments	*F.T.E.S.	Enroll- ments	*F.T.E.S.
Biol. & Agr. Sciences	588	47.9	171	7.2	759	55.1
Business	1,019	92.1	787	34.0	1,806	126.1
Education	2,239	163.6	895	12.8	3,134	176.4
Family Living	428	36.4	1,468	55.7	1,896	92.1
Fine Arts	1,062	77.8	4,129	112.2	5,191	190.0
General College	1,356	98.3	7,560	372.3	8,916	470.6
Hum. & Soc. Sciences	4,869	472.1	1,966	203.5	6,835	675.6
Nursing						
Phys. & Eng. Sciences	1,429	155.2	508	24.0	1,937	179.2
Physical Education	1,014	45.9	2,002	160.4	3,016	206.3
Religious Instruction	1,865	128.2	7,505	164.0	9,370	292.2
Unclassified			2,461	93.4	2,461	93.4
TOTALS	15,869	1,317.5	29,452	1,239.5	45,321	2,557.0

*Full-time equivalent student

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Alumni Association	58
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American Indian Student Adviser	35	Cluff, Benjamin	48
Anatomy and Experimental Zoology	408	Collection, Art	75
Animal Science	136	Collection, Fine Arts	78
Anthropology	358	Collection, Lotta Van Buren	79
Applied Music	306	Collection, Science	55
Aramaic	242	College, General	79
Archaeological Collection	55	College of Biological and	
Archaeology	140	Agricultural Sciences	62
Art	143	College of Business	65
Art Collections	78	College of Education	66
Asian Studies Program	86	College of Family Living	73
Assemblies, Devotional	195	College of Fine Arts	
Assemblies, Forum	221	and Communications	75
Assistantships	116	College of Humanities and	
Associate Degree, Nursing	316, 389	Social Sciences	86
Associated Men Students	38	College of Nursing	96
Associated Students	38	College of Physical and	
Associated Women Students	38	Engineering Sciences	100
Astronautical Engineering	300	College of Physical Education	102
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Board of Trustees	421	Councils	425
Bookstore	61	Counseling Service	35
Botanical Collection	55	Counselor for Women	36
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Brimhall, George H.	48	Courses, General Education	15
Broadcasting Journalism	189	Courses, List of	117
Building Construction, Light	398	Credit in One Semester,	
Building Construction Technology	272	Limitation on	9, 23
Business Administration	165	Credits	11, 117
Business and Office Management,		Dairy Science	137
Two-Year Program	390	Dance, Physical Education	322
Business, College of	65	Dean of Students	34, 422
Business Education	159	Deans and Directors of Programs	422
Business Management	164	Deans' Council	425
Business Teacher	159, 160	Deans of Colleges	421
Business Technology	389	Degree, Doctor of Education	111
Business, Two-Year Program	81	Degree, Doctor of Philosophy	109
B.Y.U. Bookstore	61	Degree, Master's	112
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